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(54) PROBES AND DECODER OLIGONUCLEOTIDES

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(57) **ABSTRACT**

The present invention is directed to improved methods and compositions for the use of adapter sequences on arrays in a variety of multiplexed nucleic acid reactions, including synthesis reactions, amplification reactions, and genotyping reactions.

Description of algorithm to select "best" oligonucleotide adapter sequences.

Requirements for good sequences:

- Generates adequate hybridization signal intensity when employed in an experiment.
- Exhibits minimal cross-reactivity with other adapter sequences.
- Unique within the human genome sequence. This requirement can be extended to the genomic sequence of other organisms such as the fruit fly, the mouse, etc.

One method of generating sequences that meet the above requirements is to randomly generate sequences of given lengths and than pass these filters through a set of heuristic acceptance filters. In particular, the 24-mer Illumina Adapter sequences (IllumaCodes) were chosen as follows.

Generate a random 24-mer oligonucleotide sequence	Computer randomly picks sequences from space of 24-mer oligonucleotide sequences.
↓	
$\text{Abs}(T_m - T_{thres}) < 5$ ^C Where $T_{thres} = 72$ ^C	Oligo Tm must be within a defined range. This requirment increases uniformity of hybridization signal.
↓	
$\text{Abs}(GG_{content} - GC_{thres}) < 0.15$	GC content must be balanced with AT content of oligo. This reduces sequence specific effects of hybridization.
↓	
Self-Complementary Score < 14	Reduces oligonucleotide hairpin structures.
↓	
$GC_{run} < 5$	A run of Gs or Cs can lead to poorly hybridizing probes through G quartet structures.
↓	
Decoder-Decoder Complementarity Score < 18	A high decoder-decoder complementarity score indicates that the two decoders are likely to cross-hybridize in solution.
↓	
Probe-Decoder Complementarity Score < 14	A high probe-decoder complementarity score indicates that the decoder is likely to cross-hybridize with the probe.
↓	
Blast against genome databases (Unigene DB)	The generated sequences are screened against a specified genomic database.

FIGURE 1

Flow Diagram for selection of probes sequences

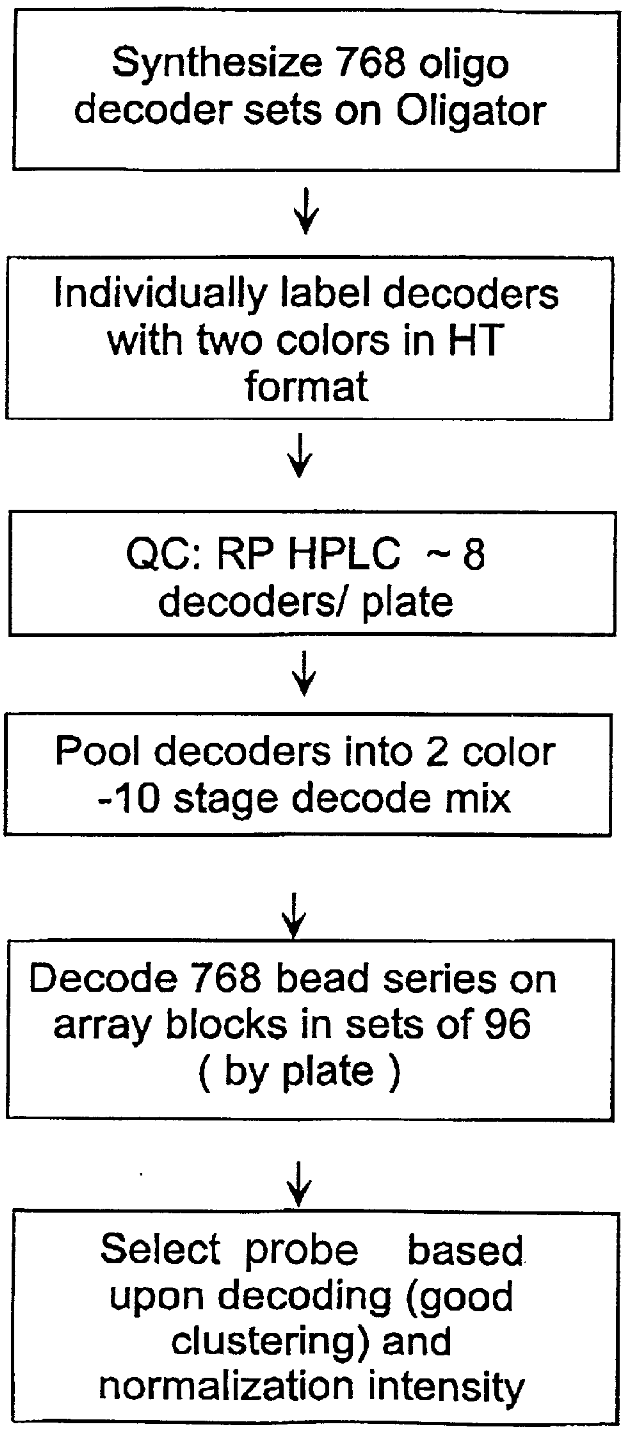

FIGURE 2

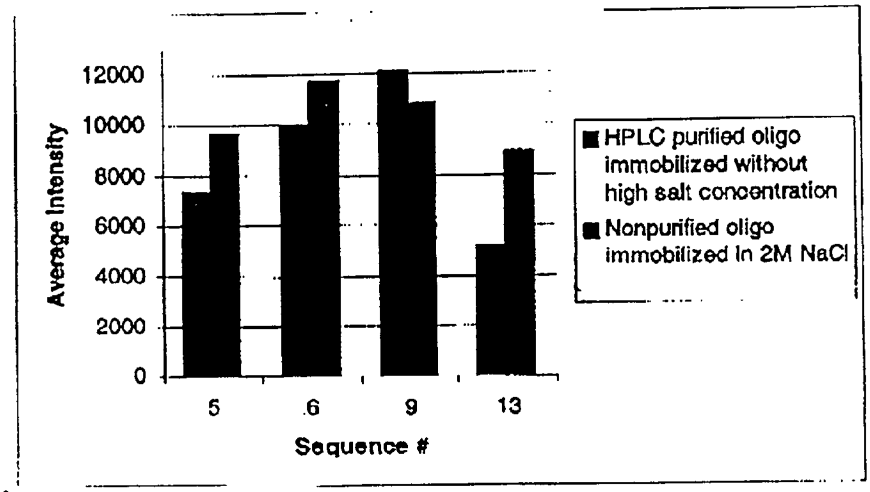
Average Intensity
12000
10000
8000
6000
4000
2000
0
5
6
9
13
Sequence #
HPLC purified oligo immobilized without high salt concentration
Nonpurified oligo immobilized in 2M NaCl

Figure 3

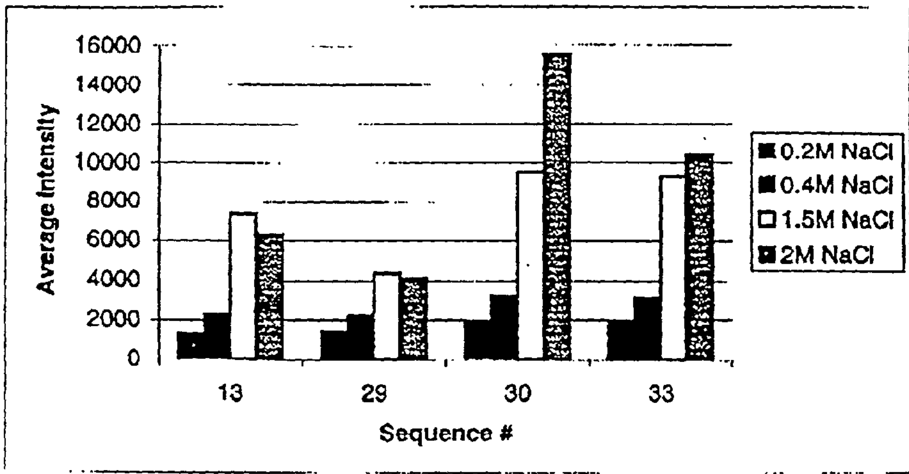
16000
14000
12000
10000
8000
6000
4000
2000
0
Average Intensity
13
29
30
33
Sequence #
0.2M NaCl
0.4M NaCl
1.5M NaCl
2M NaCl

Figure 4

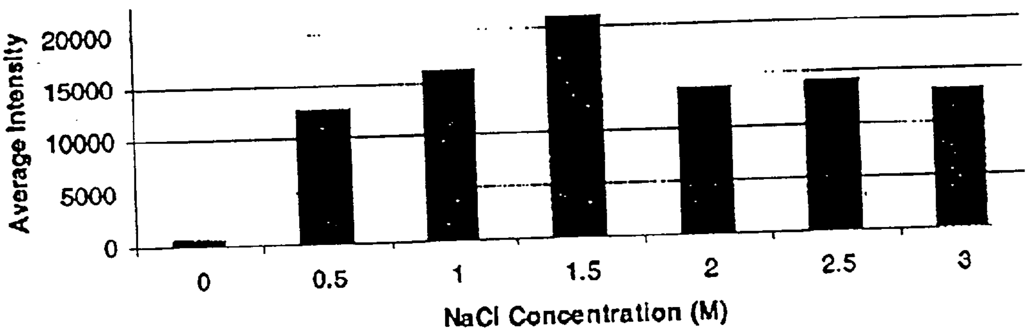
Average Intensity
20000
15000
10000
5000
0
0
0.5
1
1.5
2
2.5
3
NaCl Concentration (M)

Figure 5

PROBES AND DECODER OLIGONUCLEOTIDES

[0001] This application claims the benefit of U.S. Ser. Nos. 60/227,948 filed Aug. 25, 2000 and 60/228,854, filed Aug. 29, 2001, both of which are expressly incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present invention is directed to methods and compositions for the use of adapter sequences on arrays in a variety of nucleic acid reactions, including synthesis reactions, amplification reactions, and genotyping reactions.

BACKGROUND OF THE INVENTION

[0003] The detection of specific nucleic acids is an important tool for diagnostic medicine and molecular biology research. Gene probe assays currently play roles in identifying infectious organisms such as bacteria and viruses, in probing the expression of normal and mutant genes and identifying mutant genes such as oncogenes, in typing tissue for compatibility preceding tissue transplantation, in matching tissue or blood samples for forensic medicine, and for exploring homology among genes from different species.

[0004] Ideally, a gene probe assay should be sensitive, specific and easily automatable (for a review, see Nickerson, Current Opinion in Biotechnology 4:48-51 (1993)). The requirement for sensitivity (i.e. low detection limits) has been greatly alleviated by the development of the polymerase chain reaction (PCR) and other amplification technologies which allow researchers to amplify exponentially a specific nucleic acid sequence before analysis (for a review, see Abramson et al., Current Opinion in Biotechnology, 4:41-47 (1993)).

[0005] Specificity, in contrast, remains a problem in many currently available gene probe assays. The extent of molecular complementarity between probe and target defines the specificity of the interaction. Variations in the concentrations of probes, of targets and of salts in the hybridization medium, in the reaction temperature, and in the length of the probe may alter or influence the specificity of the probe/target interaction.

[0006] It may be possible under some circumstances to distinguish targets with perfect complementarity from targets with mismatches, although this is generally very difficult using traditional technology, since small variations in the reaction conditions will alter the hybridization. New experimental techniques for mismatch detection with standard probes include DNA ligation assays where single point mismatches prevent ligation and probe digestion assays in which mismatches create sites for probe cleavage.

[0007] Recent focus has been on the analysis of the relationship between genetic variation and phenotype by making use of polymorphic DNA markers. Previous work utilized short tandem repeats (STRs) as polymorphic positional markers; however, recent focus is on the use of single nucleotide polymorphisms (SNPs), which occur at an average frequency of more than 1 per kilobase in human genomic DNA. Some SNPs, particularly those in and around coding sequences, are likely to be the direct cause of therapeutically relevant phenotypic variants and/or disease predisposition. There are a number of well known polymorphisms that cause clinically important phenotypes; for example, the apoE2/3/4 variants are associated with different relative risk of Alzheimer's and other diseases (see Cordor et al., Science 261(1993). Multiplex PCR amplification of SNP loci with subsequent hybridization to oligonucleotide arrays has been shown to be an accurate and reliable method of simultaneously genotyping at least hundreds of SNPs; see Wang et al., Science, 280:1077 (1998); see also Schafer et al., Nature Biotechnology 16:33-39 (1998). The compositions of the present invention may easily be substituted for the arrays of the prior art.

[0008] There are a variety of particular techniques that are used to detect sequence, including mutations and SNPs. These include, but are not limited to, ligation based assays, cleavage based assays (mismatch and invasive cleavage such as Invader™), single base extension methods (see WO 92/15712, EP 0 371 437 B1, EP 0317 074 B1; Pastinen et al., Genome Res. 7:606-614 (1997); Syvänen, Clinica Chimica Acta 226:225-236 (1994); and WO 91/13075), and competitive probe analysis (e.g. competitive sequencing by hybridization; see below).

[0009] Oligonucleotide ligation amplification ("OLA", which is referred as the ligation chain reaction (LCR) when two-stranded reactions or nested reactions are done) involves the ligation of two smaller probes into a single long probe, using the target sequence as the template. See generally U.S. Pat. Nos. 5,185,243, 5,679,524 and 5,573,907; EP 0 320 308 B1; EP 0 336 731 B1; EP 0 439 182 B1; WO 90/01069; WO 89/12696; WO 97/31256 and WO 89/09835, all of which are incorporated by reference.

[0010] Invasive cleavage technology is based on structure-specific nucleases that cleave nucleic acids in a site-specific manner. Two probes are used: an "invader" probe and a "signalling" probe, that adjacently hybridize to a target sequence with a non-complementary overlap. The enzyme cleaves at the overlap due to its recognition of the "tail", and releases the "tail" with a label. This can then be detected. The Invader™ technology is described in U.S. Pat. Nos. 5,846,717; 5,614,402; 5,719,028; 5,541,311; and 5,843,669, all of which are hereby incorporated by reference.

[0011] An additional technique utilizes sequencing by hybridization. For example, sequencing by hybridization has been described (Drmanac et al., Genomics 4:114 (1989); Koster et al., Nature Biotechnology 14:1123 (1996); U.S. Pat. Nos. 5,525,464; 5,202,231 and 5,695,940, among others, all of which are hereby expressly incorporated by reference in their entirety).

[0012] Sensitivity, i.e. detection limits, remain a significant obstacle in nucleic acid detection systems, and a variety of techniques have been developed to address this issue. Briefly, these techniques can be classified as either target amplification or signal amplification. Target amplification involves the amplification (i.e. replication) of the target sequence to be detected, resulting in a significant increase in the number of target molecules. Target amplification strategies include the polymerase chain reaction (PCR), strand displacement amplification (SDA), and nucleic acid sequence based amplification (NASBA).

[0013] Alternatively, rather than amplify the target, alternate techniques use the target as a template to replicate a signalling probe, allowing a small number of target molecules to result in a large number of signalling probes, that

then can be detected. Signal amplification strategies include the ligase chain reaction (LCR), cycling probe technology (CPT), invasive cleavage techniques such as Invader™ technology, Q-Beta replicase (QβR) technology, and the use of "amplification probes" such as "branched DNA" that result in multiple label probes binding to a single target sequence.

[0014] The polymerase chain reaction (PCR) is widely used and described, and involves the use of primer extension combined with thermal cycling to amplify a target sequence; see U.S. Pat. Nos. 4,683,195 and 4,683,202, and PCR Essential Data, J. W. Wiley & sons, Ed. C. R. Newton, 1995, all of which are incorporated by reference. In addition, there are a number of variations of PCR which also find use in the invention, including "quantitative competitive PCR" or "QC-PCR", "arbitrarily primed PCR" or "AP-PCR", "immuno-PCR", "Alu-PCR", "PCR single strand conformational polymorphism" or "PCR-SSCP", allelic PCR (see Newton et al. Nucl. Acid Res. 17:2503 91989); "reverse transcriptase PCR" or "RT-PCR", "biotin capture PCR", "vectorette PCR". "panhandle PCR", and "PCR select cDNA subtraction", among others.

[0015] Strand displacement amplification (SDA) is generally described in Walker et al., in Molecular Methods for Virus Detection, Academic Press, Inc., 1995, and U.S. Pat. Nos. 5,455,166 and 5,130,238, all of which are hereby incorporated by reference.

[0016] Nucleic acid sequence based amplification (NASBA) is generally described in U.S. Pat. No. 5,409,818 and "Profiting from Gene-based Diagnostics", CTB International Publishing Inc., N.J., 1996, both of which are incorporated by reference.

[0017] Cycling probe technology (CPT) is a nucleic acid detection system based on signal or probe amplification rather than target amplification, such as is done in polymerase chain reactions (PCR). Cycling probe technology relies on a molar excess of labeled probe which contains a scissile linkage of RNA. Upon hybridization of the probe to the target, the resulting hybrid contains a portion of RNA:DNA. This area of RNA:DNA duplex is recognized by RNAseH and the RNA is excised, resulting in cleavage of the probe. The probe now consists of two smaller sequences which may be released, thus leaving the target intact for repeated rounds of the reaction. The unreacted probe is removed and the label is then detected. CPT is generally described in U.S. Pat. Nos. 5,011,769, 5,403,711, 5,660,988, and 4,876,187, and PCT published applications WO 95/05480, WO 95/1416, and WO 95/00667, all of which are specifically incorporated herein by reference.

[0018] The oligonucleotide ligation assay (OLA) involve the ligation of at least two smaller probes into a single long probe, using the target sequence as the template for the ligase. See generally U.S. Pat. Nos. 5,185,243, 5,679,524 and 5,573,907; EP 0 320 308 B1; EP 0 336 731 B1; EP 0 439 182 B1; WO 90/01069; WO 89/12696; and WO 89/09835, all of which are incorporated by reference.

[0019] Invader™ technology is based on structure-specific polymerases that cleave nucleic acids in a site-specific manner. Two probes are used: an "invader" probe and a "signalling" probe, that adjacently hybridize to a target sequence with overlap. For mismatch discrimination, the invader technology relies on complementarity at the overlap position where cleavage occurs. The enzyme cleaves at the overlap, and releases the "ail" which may or may not be labeled. This can then be detected. The Invader™ technology is described in U.S. Pat. Nos. 5,846,717; 5,614,402; 5,719,028; 5,541,311; and 5,843,669, all of which are hereby incorporated by reference.

[0020] "Branched DNA" signal amplification relies on the synthesis of branched nucleic acids, containing a multiplicity of nucleic acid "arms" that function to increase the amount of label that can be put onto one probe. This technology is generally described in U.S. Pat. Nos. 5,681,702, 5,597,909, 5,545,730, 5,594,117, 5,591,584, 5,571,670, 5,580,731, 5,571,670, 5,591,584, 5,624,802, 5,635,352, 5,594,118, 5,359,100, 5,124,246 and 5,681,697, all of which are hereby incorporated by reference.

[0021] Similarily, dendrimers of nucleic acids serve to vastly increase the amount of label that can be added to a single molecule, using a similar idea but different compositions. This technology is as described in U.S. Pat. No. 5,175,270 and Nilsen et al., J. Theor. Biol. 187:273 (1997), both of which are incorporated herein by reference.

[0022] U.S. Ser. Nos. 09/189,543; 08/944,850; 09/033,462; 09/287,573; 09/151,877; 09/187,289 and 09/256,943; and PCT applications US98/09163 and US99/14387; US98/21193; US99/04473 and US98/05025, all of which are expressly incorporated by reference, describe novel compositions utilizing substrates with microsphere arrays, which allow for novel detection methods of nucleic acid hybridization.

[0023] The use of adapter-type sequences that allow the use of universal arrays has been described in limited contexts; see for example Chee et al., Nucl. Acid Res. 19:3301 (1991); Shoemaker et al., Nature Genetics 14:450 (1996); U.S. Pat. Nos. 5,494,810, 5,830,711, 6,027,889, 6,054,564, and 6,268,148; and EP 0 799 897 A1; WO 97/31256, all of which are expressly incorporated by reference.

[0024] Accordingly, it is an object of the present invention to provide methods for detecting nucleic acid reactions, and other target analytes, on arrays using adapter sequences.

SUMMARY OF THE INVENTION

[0025] In accordance with the above objects, the invention also provides a method of detecting a target nucleic acid. The method comprises contacting the target nucleic acid with an adapter sequence such that the target nucleic acid is joined to the adapter sequence to form a modified target nucleic acid. In addition, the method comprises contacting the modified target nucleic acid with an array comprising a substrate with a surface comprising discrete sites and a population of microspheres comprising at least a first subpopulation comprising a first capture probe, such that the first capture probe and the modified target nucleic acid form a complex, wherein the microspheres are distributed on the surface, and detecting the presence fo the target nucleic acid. In addition the method comprises adding at least one decoding binding ligand to the array such that the identity of the target nucleic acid is determined. Preferably the adapter nucleic acids include a sequence as set forth in Table Table I, Table II, Table III or Table IV.

[0026] In addition the invention provides a method of making an array. The method comprises forming a surface

comprising individual sites on a substrate, distributing microspheres on the surface such that the individual sites contain microspheres, wherein the microspheres comprise at least a first and a second subpopulation each comprising a capture probe, wherein the capture probe is complementary to an adapter sequence, the adapter sequence joined to a target nucleic acid, and an identifier binding ligand that will bind at least one decoder binding ligand such that the identification of the target nucleic acid is elucidated. Preferably the adapter nucleic acids include a sequence as set forth in Table I, Table II, Table III or Table IV.

[**0027**] In addition the invention provides a kit comprising at least one nucleic acid selected from the group consisting of the sequences set forth it Table I, Table II, Table III or Table IV. In one embodiment the invention provides a kit that includes a nucleic acid that includes a sequence as set forth in Table I, Table II, Table III or Table IV and at least a first universal priming sequence.

[**0028**] In addition the invention includes an array composition comprising a first population of microspheres comprising first and second subpopulations, wherein the first subpopulation includes a first nucleic acid selected from the sequences set forth in Table I, Table II, Table III or Table IV and the second subpopulation includes a second sequence selected from the sequences set forth in Table I, Table II, Table III or Table IV.

[**0029**] In addition the invention includes an array composition comprising a first sequence at a known location on a substrate, wherein the first sequence is selected from the sequences set forth in Table I, Table II, Table III or Table IV.

[**0030**] In addition the invention includes a method for making an array. The method includes distributing a population of microspheres on an substrate, wherein the population includes first and second subpopulations, wherein the first subpopulation includes a first sequence selected from the group consisting of the sequences set forth in Table I, Table II, Table III or Table IV and the second subpopulation includes a second sequence selected from the group consisting of the sequences set forth in Table I, Table II, Table III or Table IV.

[**0031**] In addition the method includes a method of immobilizing a target nucleic acid. The method includes hybridizing a first adapter probe with a first target nucleic acid, wherein the first adapter probe comprises a first domain that is complementary to the first target nucleic acid and a second domain, comprising a first sequence selected from the sequences set forth in Table I, Table II, Table III or Table IV to form a first hybridization complex. In addition the method includes contacting the first hybridization complex with a first capture probe immobilized on a first substrate, wherein the first capture probe is substantially complementary to the second domain of the first adapter probe.

[**0032**] In addition the invention includes a method of decoding an array composition comprising providing an array composition that includes a substrate with a surface comprising discrete sites and a population of microspheres comprising at least a first and a second subpopulation, wherein each subpopulation comprises a bioactive agent. The microspheres are distributed on the surface. The method further includes adding a plurality of decoding binding ligands to the array composition to identify the location of at least a plurality of the bioactive agents wherein at least a first decoder binding ligand comprises a sequence selected from the group consisting of the sequences of Table I, Table II, Table III or Table IV.

[**0033**] A method of detecting a target nucleic acid sequence, said method comprising attaching a first adapter nucleic acid to a first target nucleic acid sequence to form a modified first target nucleic acid sequence, wherein the first adapter nucleic acid includes a sequence selected from the sequences set forth in Table I, Table II, Table III or Table IV. The method further includes contacting the modified first target nucleic acid sequence with an array comprising a substrate with a patterned surface comprising discrete sites and a population of microspheres comprising at least a first subpopulation comprising a first capture probe, such that the first capture probe and the modified first target nucleic acid sequence form a hybridization complex; wherein the microspheres are distributed on the surface and detecting the presence of the modified first target nucleic acid sequence.

DETAILED DESCRIPTION OF THE FIGURES

[**0034**] **FIG. 1** depicts a method of selecting oligonucleotide sequences.

[**0035**] **FIG. 2** depicts a scheme for selection of probes and decoder oligonucleotides.

[**0036**] **FIG. 3** demonstrates hybridization intensity comparison of immobilized beads using non-purified oligonucleotides with HPLC purified oligonucleotides.

[**0037**] **FIG. 4** depicts different oligonucleotide sequences immobilized onto silica beads at various salt concentration. Average intensity indicates hybridization intensity of beads in a BeadArray.

[**0038**] **FIG. 5** depicts immobilization of oligonucleotides in increasing salt concentrations.

DETAILED DESCRIPTION OF THE INVENTION

[**0039**] This invention is directed to the use of adapter sequences, and optionally capture extender probes, that allow the use of "universal" arrays. That is, a "universal" array is an array with a set of capture probes that will hybridize to adapter sequences, for use in any number of different reactions, including the binding of nucleic acid reactions and other target analytes comprising a nucleic acid adapter sequence that can hybridize to the array. In this way, a manufacturer of arrays can make one type of array that may be used in a variety of applications, thus reducing the manufacturing costs associated with the array. In addition, in the case of bead arrays, the decoding steps as outlined below can be simplified, as one set of decoding probes can be made.

[**0040**] In general, the use of adapter sequences can be described as follows for nucleic acid reactions. An adapter sequence can be added exogenously to a target nucleic acid sequence using any number of different techniques, including, but not limited to, amplification reactions as described in U.S. Ser. Nos. 09/425,633, filed Oct. 22, 1999; 09/513, 362, filed Feb. 25, 2000; 09/517,945, filed Mar. 3, 2000; 09/535,854, filed Mar. 27, 2000; 09/553,993, filed Apr. 20, 2000; 09/556,463, filed Apr. 21, 2000; 60/135,051, filed

May 20, 1999; 60/135,053, filed May 20, 1999; 60/135,123, filed May 20, 1999; 60/130,089, filed Apr. 20, 1999; 60/160, 917, filed Oct. 22, 1999; 60/160,927, filed Oct. 22, 1999; 60/161,148, filed Oct. 22, 1999; and 60/244,119, filed Oct. 26, 2000 all of which are hereby incorporated by reference. In addition, the adapter can be added to an extension probe. The adapter sequence can then be used to target to its complementary capture probe on the surface.

[0041] Alternatively, the adapter sequences can be added to other target analytes, to generate unique and reproducible arrays of target analytes in a similar manner. By adding the nucleic acid to the target analyte (for example to an antibody in an immunoassay), the target analytes may then be arrayed.

[0042] Accordingly, the present invention provides methods for the detection of target analytes, particularly nucleic acid target sequences, in a sample. As will be appreciated by those in the art, the sample solution may comprise any number of things, including, but not limited to, bodily fluids (including, but not limited to, blood, urine, serum, lymph, saliva, anal and vaginal secretions, perspiration and semen, of virtually any organism, with mammalian samples being preferred and human samples being particularly preferred); environmental samples (including, but not limited to, air, agricultural, water and soil samples); biological warfare agent samples; research samples; purified samples, such as purified genomic DNA, RNA, proteins, etc.; raw samples (bacteria, virus, genomic DNA, etc.; As will be appreciated by those in the art, virtually any experimental manipulation may have been done on the sample.

[0043] The present invention provides methods for the detection of target analytes, particularly nucleic acid target sequences, in a sample. By "target analyte" or "analyte" or grammatical equivalents herein is meant any molecule, compound or particle to be detected. As outlined below, target analytes preferably bind to binding ligands, as is more fully described below. As will be appreciated by those in the art, a large number of analytes may be detected using the present methods; basically, any target analyte for which a binding ligand, described below, may be made may be detected using the methods of the invention.

[0044] Suitable analytes include organic and inorganic molecules, including biomolecules. In a preferred embodiment, the analyte may be an environmental pollutant (including pesticides, insecticides, toxins, etc.); a chemical (including solvents, polymers, organic materials, etc.); therapeutic molecules (including therapeutic and abused drugs, antibiotics, etc.); biomolecules (including hormones, cytokines, proteins, lipids, carbohydrates, cellular membrane antigens and receptors (neural, hormonal, nutrient, and cell surface receptors) or their ligands, etc); whole cells (including procaryotic (such as pathogenic bacteria) and eukaryotic cells, including mammalian tumor cells); viruses (including retroviruses, herpesviruses, adenoviruses, lentiviruses, etc.); and spores; etc. Particularly preferred analytes are environmental pollutants; nucleic acids; proteins (including enzymes, antibodies, antigens, growth factors, cytokines, etc); therapeutic and abused drugs; cells; and viruses.

[0045] In a preferred embodiment, the target analyte is a protein. As will be appreciated by those in the art, there are a large number of possible proteinaceous target analytes that may be detected using the present invention. By "proteins" or grammatical equivalents herein is meant proteins, oligopeptides and peptides, derivatives and analogs, including proteins containing non-naturally occurring amino acids and amino acid analogs, and peptidomimetic structures. The side chains may be in either the (R) or the (S) configuration. In a preferred embodiment, the amino acids are in the (S) or L-configuration. As discussed below, when the protein is used as a binding ligand, it may be desirable to utilize protein analogs to retard degradation by sample contaminants.

[0046] Suitable protein target analytes include, but are not limited to, (1) immunoglobulins, particularly IgEs, IgGs and IgMs, and particularly therapeutically or diagnostically relevant antibodies, including but not limited to, for example, antibodies to human albumin, apolipoproteins (including apolipoprotein E), human chorionic gonadotropin, cortisol, α-fetoprotein, thyroxin, thyroid stimulating hormone (TSH), antithrombin, antibodies to pharmaceuticals (including antieptileptic drugs (phenytoin, primidone, carbariezepin, ethosuximide, valproic acid, and phenobarbitol), cardioactive drugs (digoxin, lidocaine, procainamide, and disopyramide), bronchodilators (theophylline), antibiotics (chloramphenicol, sulfonamides), antidepressants, immunosuppresants, abused drugs (amphetamine, methamphetamine, cannabinoids, cocaine and opiates) and antibodies to any number of viruses (including orthomyxoviruses, (e.g. influenza virus), paramyxoviruses (e.g respiratory syncytial virus, mumps virus, measles virus), adenoviruses, rhinoviruses, coronaviruses, reoviruses, togaviruses (e.g. rubella virus), parvoviruses, poxviruses (e.g. variola virus, vaccinia virus), enteroviruses (e.g. poliovirus, coxsackievirus), hepatitis viruses (including A, B and C), herpesviruses (e.g. Herpes simplex virus, varicella-zoster virus, cytomegalovirus, Epstein-Barr virus), rotaviruses, Norwalk viruses, hantavirus, arenavirus, rhabdovirus (e.g. rabies virus), retroviruses (including HIV, HTLV-I and -II), papovaviruses (e.g. papillomavirus), polyomaviruses, and picornaviruses, and the like), and bacteria (including a wide variety of pathogenic and non-pathogenic prokaryotes of interest including Bacillus; Vibrio, e.g. *V. cholerae;* Escherichia, e.g. Enterotoxigenic *E. coli,* Shigella, e.g. *S. dysenteriae;* Salmonella, e.g. *S. typhi;* Mycobacterium e.g. *M. tuberculosis, M. leprae;* Clostridium, e.g. *C. botulinum, C. tetani, C. difficile, C.peffringens;* Cornyebacterium, e.g. *C. diphtheriae; Streptococcus, S. pyogenes, S. pneumoniae;* Staphylococcus, e.g. *S. aureus;* Haemophilus, e.g. *H. influenzae;* Neisseria, e.g. *N. meningitidis, N. gonorrhoeae;* Yersinia, e.g. *G. lambliaY. pestis,* Pseudomonas, e.g. *P. aeruginosa, P. putida;* Chlamydia, e.g. *C. trachomatis;* Bordetella, e.g. *B. pertussis;* Treponema, e.g. *T. palladium;* and the like); (2) enzymes (and other proteins), including but not limited to, enzymes used as indicators of or treatment for heart disease, including creatine kinase, lactate dehydrogenase, aspartate amino transferase, troponin T, myoglobin, fibrinogen, cholesterol, triglycerides, thrombin, tissue plasminogen activator (tPA); pancreatic disease indicators including amylase, lipase, chymotrypsin and trypsin; liver function enzymes and proteins including cholinesterase, bilirubin, and alkaline phosphotase; aldolase, prostatic acid phosphatase, terminal deoxynucleotidyl transferase, and bacterial and viral enzymes such as HIV protease; (3) hormones and cytokines (many of which serve as ligands for cellular receptors) such as erythropoietin (EPO), thrombopoietin (TPO), the interleukins (including IL-1 through IL-17), insulin, insulin-like growth

factors (including IGF-1 and -2), epidermal growth factor (EGF), transforming growth factors (including TGF-α and TGF-β), human growth hormone, transferrin, epidermal growth factor (EGF), low density lipoprotein, high density lipoprotein, leptin, VEGF, PDGF, ciliary neurotrophic factor, prolactin, adrenocorticotropic hormone (ACTH), calcitonin, human chorionic gonadotropin, cotrisol, estradiol, follicle stimulating hormone (FSH), thyroid-stimulating hormone (TSH), leutinzing hormone (LH), progeterone, testosterone, ; and (4) other proteins (including α-fetoprotein, carcinoembryonic antigen CEA.

[**0047**] In addition, any of the biomolecules for which antibodies may be detected may be detected directly as well; that is, detection of virus or bacterial cells, therapeutic and abused drugs, etc., may be done directly.

[**0048**] Suitable target analytes include carbohydrates, including but not limited to, markers for breast cancer (CA15-3, CA 549, CA 27.29), mucin-like carcinoma associated antigen (MCA), ovarian cancer (CA125), pancreatic cancer (DE-PAN-2), and colorectal and pancreatic cancer (CA 19, CA 50, CA242).

[**0049**] In a preferred embodiment, the target analyte (and various adapters and other probes of the invention), comprise nucleic acids. By "nucleic acid" or "oligonucleotide" or grammatical equivalents herein means at least two nucleotides covalently linked together. A nucleic acid of the present invention will generally contain phosphodiester bonds, although in some cases, as outlined below, nucleic acid analogs are included that may have alternate backbones, comprising, for example, phosphoramide (Beaucage et al., Tetrahedron 49(10):1925 (1993) and references therein; Letsinger, J. Org. Chem. 35:3800 (1970); Sprinzl et al., Eur. J. Biochem. 81:579 (1977); Letsinger et al., Nucl. Acids Res. 14:3487 (1986); Sawai et al, Chem. Lett. 805 (1984), Letsinger et al., J. Am. Chem. Soc. 110:4470 (1988); and Pauwels et al., Chemica Scripta 26:141 91986)), phosphorothioate (Mag et al., Nucleic Acids Res. 19:1437 (1991); and U.S. Pat. No. 5,644,048), phosphorodithioate (Briu et al., J. Am. Chem. Soc. 111:2321 (1989), O-methylphophoroamidite linkages (see Eckstein, Oligonucleotides and Analogues: A Practical Approach, Oxford University Press), and peptide nucleic acid backbones and linkages (see Egholm, J. Am. Chem. Soc. 114:1895 (1992); Meier et al., Chem. Int. Ed. Engl. 31:1008 (1992); Nielsen, Nature, 365:566 (1993); Carlsson et al., Nature 380:207 (1996), all of which are incorporated by reference). Other analog nucleic acids include those with positive backbones (Denpcy et al., Proc. Natl. Acad. Sci. USA 92:6097 (1995); non-ionic backbones (U.S. Pat. Nos. 5,386,023, 5,637,684, 5,602,240, 5,216,141 and 4,469,863; Kiedrowshi et al., Angew. Chem. Intl. Ed. English 30:423 (1991); Letsinger et al., J. Am. Chem. Soc. 110:4470 (1988); Letsinger et al., Nucleoside & Nucleotide 13:1597 (1994); Chapters 2 and 3, ASC Symposium Series 580, "Carbohydrate Modifications in Antisense Research", Ed. Y. S. Sanghui and P. Dan Cook; Mesmaeker et al., Bioorganic & Medicinal Chem. Left. 4:395 (1994); Jeffs et al., J. Biomolecular NMR 34:17 (1994); Tetrahedron Left. 37:743 (1996)) and non-ribose backbones, including those described in U.S. Pat. Nos. 5,235,033 and 5,034,506, and Chapters 6 and 7, ASC Symposium Series 580, "Carbohydrate Modifications in Antisense Research", Ed. Y. S. Sanghui and P. Dan Cook. Nucleic acids containing one or more carbocyclic sugars are also included within the definition of nucleic acids (see Jenkins et al., Chem. Soc. Rev. (1995) pp169-176). Several nucleic acid analogs are described in Rawls, C & E News Jun. 2,1997 page 35. All of these references are hereby expressly incorporated by reference. These modifications of the ribose-phosphate backbone may be done to facilitate the addition of labels, alter the hybridization properties of the nucleic acids, or to increase the stability and half-life of such molecules in physiological environments.

[**0050**] As will be appreciated by those in the art, all of these nucleic acid analogs may find use in the present invention. In addition, mixtures of naturally occurring nucleic acids and analogs can be made. Alternatively, mixtures of different nucleic acid analogs, and mixtures of naturally occuring nucleic acids and analogs may be made.

[**0051**] Particularly preferred are peptide nucleic acids (PNA) which includes peptide nucleic acid analogs. These backbones are substantially non-ionic under neutral conditions, in contrast to the highly charged phosphodiester backbone of naturally occurring nucleic acids. This results in two advantages. First, the PNA backbone exhibits improved hybridization kinetics. PNAs have larger changes in the melting temperature (Tm) for mismatched versus perfectly matched basepairs. DNA and RNA typically exhibit a 2-4° C. drop in Tm for an internal mismatch. With the non-ionic PNA backbone, the drop is closer to 7-9° C. This allows for better detection of mismatches. Similarly, due to their non-ionic nature, hybridization of the bases attached to these backbones is relatively insensitive to salt concentration.

[**0052**] The nucleic acids may be single stranded or double stranded, as specified, or contain portions of both Id double stranded or single stranded sequence. The nucleic acid may be DNA, both genomic and cDNA, RNA or a hybrid, where the nucleic acid contains any combination of deoxyribo- and ribo-nucleotides, and any combination of bases, including uracil, adenine, thymine, cytosine, guanine, inosine, xathanine hypoxathanine, isocytosine, isoguanine, etc. A preferred embodiment utilizes isocytosine and isoguanine in nucleic acids designed to be complementary to other probes, rather than target sequences, as this reduces non-specific hybridization, as is generally described in U.S. Pat. No. 5,681,702. As used herein, the term "nucleoside" includes nucleotides as well as nucleoside and nucleotide analogs, and modified nucleosides such as amino modified nucleosides. In addition, "nucleoside" includes non-naturally occuring analog structures. Thus for example the individual units of a peptide nucleic acid, each containing a base, are referred to herein as a nucleoside.

[**0053**] In general, probes of the present invention (including adapter sequences and capture probes, described below) are designed to be complementary to a target sequence (either the target sequence of the sample or to other probe sequences, for example adapter sequences) such that hybridization of the target and the probes of the present invention occurs. This complementarity need not be perfect; there may be any number of base pair mismatches that will interfere with hybridization between the target sequence and the single stranded nucleic acids of the present invention. However, if the number of mutations is so great that no hybridization can occur under even the least stringent of hybridization conditions, the sequence is not a complementary target sequence. Thus, by "substantially complementary"

herein is meant that the probes are sufficiently complementary to the target sequences to hybridize under the selected reaction conditions.

[0054] When nucleic acids are to be detected, they are referred to herein as "target nucleic acids" or "target sequences". The term "target sequence" or "target nucleic acid" or grammatical equivalents herein means a nucleic acid sequence on a single strand of nucleic acid. The target sequence may be a portion of a gene, a regulatory sequence, genomic DNA, cDNA, RNA including mRNA and rRNA, or others. As is outlined herein, the target sequence may be a target sequence from a sample, or a derivative target such as a product of a reaction such as a detection sequence from an Invader™ reaction, a ligated probe from an OLA reaction, an extended probe from an SBE reaction, etc. It may be any length, with the understanding that longer sequences are more specific. As will be appreciated by those in the art, the complementary target sequence may take many forms. For example, it may be contained within a larger nucleic acid sequence, i.e. all or part of a gene or mRNA, a restriction fragment of a plasmid or genomic DNA, among others. As is outlined more fully below, probes are made to hybridize to target sequences to determine the presence or absence of the target sequence in a sample. Generally speaking, this term will be understood by those skilled in the art. The target sequence may also be comprised of different target domains; for example, a first target domain of the sample target sequence may hybridize to a capture probe, a second target domain may hybridize to a portion of a label probe, etc. The target domains may be adjacent or separated as indicated. Unless specified, the terms "first" and "second" are not meant to confer an orientation of the sequences with respect to the 5'-3' orientation of the target sequence. For example, assuming a 5'-3' orientation of the complementary target sequence, the first target domain may be located either 5' to the second domain, or 3' to the second domain. In addition, as will be appreciated by those in the art, the probes on the surface of the array (e.g. attached to the microspheres) may be attached in either orientation, either such that they have a free 3' end or a free 5' end.

[0055] As is more fully outlined below, the target sequence may comprise a position for which sequence information is desired, generally referred to herein as the "detection position" or "detection locus". In a preferred embodiment, the detection position is a single nucleotide, although in some embodiments, rt may comprise a plurality of nucleotides, either contiguous with each other or separated by one or more nucleotides. By "plurality" as used herein is meant at least two. As used herein, the base which basepairs with a detection position base in a hybrid is termed a "readout position" or an "interrogation position".

[0056] In some embodiments, as is outlined herein, the target sequence may not be the sample target sequence but instead is a product of a reaction herein, sometimes referred to herein as a "secondary" or "derivative" target sequence. Thus, for example, in SBE, the extended primer may serve as the target sequence; similarly, in invasive cleavage variations, the cleaved detection sequence may serve as the target sequence.

[0057] If required, the target sequence is prepared using known techniques. For example, the sample may be treated to lyse the cells, using known lysis buffers, electroporation, etc., with purification and/or amplification as needed, as will be appreciated by those in the art.

[0058] Once prepared, the target sequence can be used in a variety of reactions for a variety of reasons. For example, in a preferred embodiment, genotyping reactions are done. Similarly, these reactions can also be used to detect the presence or absence of a target sequence. Sequencing or amplification reactions are also preferred. In addition, in any reaction, quantitation of the amount of a target sequence may be done.

[0059] Furthermore, as outlined below for each reaction, many of these techniques may be used in a solution based assay, wherein the reaction is done in solution and a reaction product is bound to the array for subsequent detection, or in solid phase assays, where the reaction occurs on the surface and is detected.

[0060] In general, the present invention provides pairs of capture probes (nucleic acids that are attached to addresses on arrays) and adapter sequences (sequences that are either perfectly or substantially complementary to the capture probe sequences) that can be used in a wide variety of ways, to immobilize target nucleic acids (either primary targets, such as genomic DNA, mRNA or cDNA, or secondary targets such as amplicons from a nucleic acid amplification or extension reaction, as outlined herein) to the addresses of the array. Thus, all the sequences in the Tables include their complements, and either sequence can be used as a capture probe (e.g. spotted onto a surface or attached to a microsphere of an array) or as the adapter sequence that binds to the capture probe.

[0061] Accordingly, by "adapter sequences" or "adapters" or grammatical equivalents is meant a nucleic acid segment generally non-native or exogenous to a target molecule that is used to immobilize the target molecule to a solid support via binding to a capture probe sequence. In a preferred embodiment the adapter sequences and capture probes are selected from the sequences set forth in Table I, Table II, Table III or Table IV.

[0062] Table I includes the sequence of the preferred 4000 sequences labeled "Decoder (5'-3')", and inherent in this table are the complementary sequences as well. In addition, the invention includes oligonucleotides that are complementary to those depicted in Table 1.

[0063] Table II includes the sequence of the preferred adapter/capture probe sequences and their complementary sequence. Table 2 depicts a preferred subset of 3172 decoder oligonucleotides and their complementary probe oligonucleotides. Accordingly, the invention provides compositions comprising a sequence as outlined in Table 2. In addition, the invention provides a composition comprising a complementary binding pair as outlined in Table 2.

[0064] Table 3 includes a preferred subset of 768 decoder oligonucleotides and complementary probe sequences. In some embodiments it may be desirable to include a uniform base at a terminus of the oligonucleotide, such as a T at the 5' end as depicted in Table 4. The inclusion of this uniform or constant base facilitates uniform labeling of the oligonucleotides.

[0065] These sequences are used as decoder probes, capture probes or adapter sequences as outlined in U.S .Ser. No.

09/344,526 and PCT/US99/14387, and U.S. Ser. Nos. 60/160,917 and 09/5656,463 all of which are expressly incorporated by reference in their entirety.

[0066] As will be appreciated by those in the art, the length of the capture probe/adapter sequences will vary, depending on the desired "strength" of binding and the number of different adapters desired. In a preferred embodiment, adapter sequences range from about 5 to about 500 basepairs in length, with from about 8 to about 100 being preferred, and from about 10 to about 50 being particularly preferred.

[0067] As will be appreciated by those in the art, it is desirable to have adapter sequences that do not have significant homology to naturally occurring target sequences, to avoid non-specific or erroneous binding of target sequences to the capture probes. Accordingly, preferred embodiments utilize some method to select useful adapter sequences. In a preferred embodiment the method is outlined in **FIG. 1**. Briefly, random 24-mer (or could be any desired length as outlined herein), sequences were assembled and subjected to certain defined screening procedures including such steps as requiring that the Tm of each of the sequence be within a pre-defined range. In addition the GC content must be balanced with the AT content and the self-complementarity must be minimized. In addition GC runs should be minimized, that is, runs of Gs or Cs should be reduced. In addition, decoder (adapter) to decoder (adapter) complementarity should be reduced so that the adapters do not hybridize with each other. Finally, the sequences are screened against a specified genomic database. In a preferred embodiment the adapters comprise at least one sequence selected from the sequences in Table I, Table II, Table III or Table IV.

[0068] In a preferred embodiment, the adapter sequences are chosen on the basis of a decoding step. As is more fully outlined below, a decoding step is used to decode random bead arrays. In this embodiment, a set of candidate capture probes is chosen; this may be done in a variety of ways. In a preferred embodiment, the sequences are generated randomly, each of a sufficient length to ensure a low probability of occurring naturally. In some embodiments, for example when the array will be used with a particular organism's genome (e.g. the human genome, the Drosophila genome, etc.), the sequences are compared to the genome as a first filter, for example to remove sequences that would cross hybridize. Additionally, further filtering may be done using well-known methods, such as known methods for selecting good PCR primers. These techniques generally include steps that remove sequences that may have a propensity to form secondary structures or otherwise to cross-hybridize. Additionally, sequences that have extremes of melting temperatures can be optionally discarded, depending on the planned assay conditions.

[0069] Once a set of candidate capture probes is obtained, an array comprising the capture probes is made, and a matching set of decoding probes comprising the adapter sequences (e.g. the complements of the capture probes), as more fully outlined below, is made. Decoding then proceeds. Probes that do not hybridize well, for whatever reason, will not decode well, generally due to weak signals, and are generally discarded. Probes that cross-hybridize will also not decode well, as they will give ambiguous or mixed decoding signals. Only probes that hybridize sufficiently strongly and specifically will decode. Thus, by setting suitable thresholds for signal strength and signal purity, adapter sequences that perform according to specified criteria are identified. Additionally, by setting a range on signal strength, capture probe/adapter sequence pairs that perform similarly (but hybridize specifically) are identified. In a preferred embodiment, decoding reactions are repeated, under a variety of conditions, to test the robustness of the sequence pair.

[0070] Once identified, the adapter sequences are added to target sequences in a variety of ways, as will be appreciated by those in the art. In a preferred embodiment, nucleic acid amplification reactions are done, as is generally outlined in "Detection of Nucleic Acid Amplification Reactions Using Bead Arrays" and "Sequence Determination of Nucleic Acids using Arrays with Microspheres", both of which were filed on Oct. 22, 1999, (U.S. Ser. Nos. 60/161,148 and 09/425,633, respectively), both of which are hereby incorporated by reference in their entirety. These may be either target amplification or signal amplification. In general, the techniques can be described as follows. Most amplification techniques require one or more primers hybridizing to all or part the target sequence (e.g. that hybridize to a target domain). The adapter sequences can be added to one or more of the primers (depending on the configuration/orientation of the system and need) and the amplification reactions are run. Thus, for example, PCR primers comprising at least one adapter sequence (and preferably one on each PCR primer) may be used; one or both of the ligation probes of an OLA or LCR reaction may comprise an adapter sequence; the sequencing primers for pyrosequencing, single-base extension, reversible chain termination, etc., reactions may comprise an adapter sequence; either the invader probe or the signalling probe of invasive cleavage reactions can comprise an adapter sequence; etc. Similarly, for signal detection techniques, the probes may comprise adapter sequences, with preferred methods utilizing removal of the unreacted probes. In addition, primers may include universal priming sequences. That is, the adapters may additionally contain universal priming sequences for universal amplification of products of any of the reactions described herein. Universal priming sequences are further outlined in 09/779376, filed Feb. 7, 2001; 09/779202, filed Feb. 7, 2001; 09/915231, filed Jul. 24, 2001; 60/180810, filed Feb. 7, 2000; and 60/297609, filed Jun. 11, 2001; and 60/311194 filed Aug. 9, 2001, all of which are expressly incorporated herein by reference.

[0071] In an alternative embodiment, non-nucleic acid reactions are used to add adapter sequences to the nucleic acid targets. For example, for the direct detection of non-amplified target sequences (e.g. genomic DNA samples, etc.) on universal arrays, non-amplification methods are required. In this embodiment, binding partner pairs or chemical methods may be used. For example, one member of a binding partner pair may be attached to the adapter sequence and the other member attached to the target sequence. For example, the binding partner be a hapten or antigen, which will bind its binding partner. For example, suitable binding partner pairs include, but are not limited to: antigens (such as proteins (including peptides)) and antibodies (including fragments thereof (FAbs, etc.)); proteins and small molecules, including biotin/streptavidin and digoxygenin and antibodies; enzymes and substrates or inhibitors; other protein-protein interacting pairs; receptor-

ligands; and carbohydrates and their binding partners, are also suitable binding pairs. Nucleic acid-nucleic acid binding proteins pairs are also useful. In general, the smaller of the pair is attached to the NTP (or the probe) for incorporation into the extension primer. Preferred binding partner pairs include, but are not limited to, biotin (or imino-biotin) and streptavidin, digeoxinin and Abs, and Prolinx™ reagents.

[**0072**] In a preferred embodiment, chemical attachment methods are used. In this embodiment, chemical functional groups on each of the target sequences and adapter sequences are used. As is known in the art, this may be accomplished in a variety of ways. Preferred functional groups for attachment are amino groups, carboxy groups, oxo groups and thiol groups, with amino groups being particularly preferred. Using these functional groups, the two sequences are joined together; for example, amino groups on each nucleic acid may be attached, for example using linkers as are known in the art; for example, homo-or hetero-bifunctional linkers as are well known (see 1994 Pierce Chemical Company catalog, technical section on cross-linkers, pages 155-200, incorporated herein by reference).

[**0073**] In a preferred embodiment, aptamers are used in the system. Aptamers are nucleic acids that can be made to bind to virtually any target analyte; see Bock et al., Nature 355:564 (1992); Femulok et al., Current Op. Chem. Biol. 2:230 (1998); and U.S. Pat. Nos. 5,270,163, 5,475,096, 5,567,588, 5,595,877, 5,637,459, 5,683,867,5,705,337, and related patents, hereby incorporated by reference.

[**0074**] In a preferred embodiment, an array comprising capture probes that hybridize to adapter sequences is made, as outlined herein. In one embodiment aptamers, comprising adapter sequences, can be added. As will be appreciated by those in the art, the aptamers may be preassociated with their binding partners, e.g. target analytes, prior to introduction to the array, or not. In addition, the association between the adapter sequences on the aptamers and the capture probes can be made covalent, for example through the use of reactive groups (e.g. psoralen) and appropriate activation.

[**0075**] In addition, the present invention is directed to the use of adapter sequences to assemble arrays comprising other target analytes.

[**0076**] The adapter sequences may be chosen as outlined above. Preferably the adapters are selected from the sequences set forth in Table I, Table II, Table III or Table IV. These adapter sequences can then be added to the target analytes using a variety of techniques. In general, as described above, non-covalent attachment using binding partner pairs may be done, or covalent attachment using chemical moieties (including linkers).

[**0077**] Advantages of using adapters include but are not limited to, for example, the ability to create universal arrays. That is, a single array is utilized with each capture probe designed to hybridize with a specific adapter. The adapters are joined to any number of target analytes, such as nucleic acids, as is described herein. Thus, the same array is used for vastly different target analytes. Furthermore, hybridization of adapters with capture probes results in non-covalent attachment of the target nucleic acid to the address of the array (e.g. a microsphere in some embodiments). As such, the target nucleic/adapter hybrid is easily removed, and the microsphere/capture probe can be re-used. In addition, the construction of kits is greatly facilitated by the use of adapters. For example, arrays or microspheres can be prepared that comprise the capture probe; the adapters can be packaged along with the microspheres for attachment to any target analyte of interest. Thus, one need only attach the adapter to the target analyte and disperse on the array for the construction of an array of target analytes.

[**0078**] Accordingly the present invention provides kits comprising adapters. Preferably the kits include at least 1 nucleic acid sequence as set forth in Table 1. More preferably the kits include at least 10-25 nucleic acids, with at least 50 nucleic acids more preferred. Even more preferable are kits that include at least 100 nucleic acids with more than 1000 even more preferred and more than 2000 even more preferred.

[**0079**] It should also be noted that the sequences defined herein can also be used in "sandwich" assay formats, wherein a capture extender probe comprising a first domain that will hybridize to the capture probe and a second domain that has a target specific domain is used. The capture extender probe hybridizes both to the target sequence and the capture probe, thereby immobilizing the target sequence on the array.

[**0080**] Once the adapter sequences are associated with the target analyte, including target nucleic acids, the compositions are added to an array comprising addresses comprising capture probes. In one embodiment a plurality of hybrid adapter sequence/target analytes are pooled prior to addition to an array. All of the methods and compositions herein are drawn to compositions and methods for detecting the presence of target analytes, particularly nucleic acids, using adapter arrays.

[**0081**] Accordingly, the present invention provides array compositions comprising at least a first substrate with a surface comprising individual sites. The present system finds particular utility in array formats, i.e. wherein there is a matrix of capture probes (herein generally referred to "pads", "addresses" or "micro-locations"). By "array" or "biochip" herein is meant a plurality of nucleic acids in an array format; the size of the array will depend on the composition and end use of the array. Nucleic acids arrays are known in the art, and can be classified in a number of ways; both ordered arrays (e.g. the ability to resolve chemistries at discrete sites), and random arrays are included. Ordered arrays include, but are not limited to, those made using photolithography techniques (Affymetrix GeneChip™), spotting techniques (Synteni and others), printing techniques (Hewlett Packard and Rosetta), three dimensional "gel pad" arrays, etc. In one embodiment the ordered arrays include arrays that contain nucleic acids at known locations. That is, the adapters or capture probes described herein are immobilized at known locations on a substrate. By "known" locations is meant a site that is known or has been known.

[**0082**] In addition, adapters find use "liquid arrays". By "liquid arrays" is meant an array in solution for analysis, for example, by flow cytometry.

[**0083**] A preferred embodiment utilizes microspheres on a variety of substrates including fiber optic bundles, as are

outlined in PCTs US98/21193, PCT US99/14387 and PCT US98/05025; WO98/50782; and U.S. Ser. Nos. 09/287,573, 09/151,877, 09/256,943, 09/316,154, 60/119,323, 09/315, 584; all of which are expressly incorporated by reference. While much of the discussion below is directed to the use of microsphere arrays on fiber optic bundles, any array format of nucleic acids on solid supports may be utilized.

[0084] Arrays containing from about 2 different bioactive agents (e.g. different beads, when beads are used) to many millions can be made, with very large arrays being possible. Generally, the array will comprise from two to as many as a billion or more, depending on the size of the beads and the substrate, as well as the end use of the array, thus very high density, high density, moderate density, low density and very low density arrays may be made. Preferred ranges for very high density arrays are from about 10,000,000 to about 2,000,000,000, with from about 100,000,000 to about 1,000, 000,000 being preferred (all numbers being in square cm). High density arrays range about 100,000 to about 10,000, 000, with from about 1,000,000 to about 5,000,000 being particularly preferred. Moderate density arrays range from about 10,000 to about 100,000 being particularly preferred, and from about 20,000 to about 50,000 being especially preferred. Low density arrays are generally less than 10,000, with from about 1,000 to about 5,000 being preferred. Very low density arrays are less than 1,000, with from about 10 to about 1000 being preferred, and from about 100 to about 500 being particularly preferred. In some embodiments, the compositions of the invention may not be in array format; that is, for some embodiments, compositions comprising a single bioactive agent may be made as well. In addition, in some arrays, multiple substrates may be used, either of different or identical compositions. Thus for example, large arrays may comprise a plurality of smaller substrates.

[0085] In addition, one advantage of the present compositions is that particularly through the use of fiber optic technology, extremely high density arrays can be made. Thus for example, because beads of 200 μm or less (with beads of 200 nm possible) can be used, and very small fibers are known, it is possible to have as many as 40,000 or more (in some instances, 1 million) different elements (e.g. fibers and beads) in a 1 mm^2 fiber optic bundle, with densities of greater than 25,000,000 individual beads and fibers (again, in some instances as many as 50-100 million) per 0.5 cm^2 obtainable (4 million per square cm for 5 μ center-to-center and 100 million per square cm for 1 μ center-to-center).

[0086] By "substrate" or "solid support" or other grammatical equivalents herein is meant any material that can be modified to contain discrete individual sites appropriate for the attachment or association of beads and is amenable to at least one detection method. As will be appreciated by those in the art, the number of possible substrates is very large. Possible substrates include, but are not limited to, glass and modified or functionalized glass, plastics (including acrylics, polystyrene and copolymers of styrene and other materials, polypropylene, polyethylene, polybutylene, polyurethanes, Teflon, etc.), polysaccharides, nylon or nitrocellulose, resins, silica or silica-based materials including silicon and modified silicon, carbon, metals, inorganic glasses, plastics, optical fiber bundles, and a variety of other polymers. In general, the substrates allow optical detection and do not themselves appreciably fluoresce.

[0087] Generally the substrate is flat (planar), although as will be appreciated by those in the art, other configurations of substrates may be used as well; for example, three dimensional configurations can be used, for example by embedding the beads in a porous block of plastic that allows sample access to the beads and using a confocal microscope for detection. Similarly, the beads may be placed on the inside surface of a tube, for flow-through sample analysis to minimize sample volume. Preferred substrates include optical fiber bundles as discussed below, and flat planar substrates such as glass, polystyrene and other plastics and acrylics.

[0088] In a preferred embodiment, the substrate is an optical fiber bundle or array, as is generally described in U.S. Ser. Nos. 08/944,850 and 08/519,062, PCT US98/05025, and PCT US98/09163, all of which are expressly incorporated herein by reference. Preferred embodiments utilize preformed unitary fiber optic arrays. By "preformed unitary fiber optic array" herein is meant an array of discrete individual fiber optic strands that are co-axially disposed and joined along their lengths. The fiber strands are generally individually clad. However, one thing that distinguished a preformed unitary array from other fiber optic formats is that the fibers are not individually physically manipulatable; that is, one strand generally cannot be physically separated at any point along its length from another fiber strand.

[0089] At least one surface of the substrate is modified to contain discrete, individual sites for later association of microspheres. These sites may comprise physically altered sites, i.e. physical configurations such as wells or small depressions in the substrate that can retain the beads, such that a microsphere can rest in the well, or the use of other forces (magnetic or compressive), or chemically altered or active sites, such as chemically functionalized sites, electrostatically altered sites, hydrophobically/ hydrophilically functionalized sites, spots of adhesive, etc.

[0090] The sites may be a pattern, i.e. a regular design or configuration, or randomly distributed. A preferred embodiment utilizes a regular pattern of sites such that the sites may be addressed in the X-Y coordinate plane. "Pattern" in this sense includes a repeating unit cell, preferably one that allows a high density of beads on the substrate. However, it should be noted that these sites may not be discrete sites. That is, it is possible to use a uniform surface of adhesive or chemical functionalities, for example, that allows the attachment of beads at any position. That is, the surface of the substrate is modified to allow attachment of the microspheres at individual sites, whether or not those sites are contiguous or non-contiguous with other sites. Thus, the surface of the substrate may be modified such that discrete sites are formed that can only have a single associated bead, or alternatively, the surface of the substrate is modified and beads may go down anywhere, but they end up at discrete

[0091] In a preferred embodiment, the surface of the substrate is modified to contain wells, i.e. depressions in the surface of the substrate. This may be done as is generally known in the art using a variety of techniques, including, but not limited to, photolithography, stamping techniques, molding techniques and microetching techniques. As will be appreciated by those in the art, the technique used will depend on the composition and shape of the substrate.

[0092] In a preferred embodiment, physical alterations are made in a surface of the substrate to produce the sites. In a

preferred embodiment, the substrate is a fiber optic bundle and the surface of the substrate is a terminal end of the fiber bundle, as is generally described in 08/818,199 and 09/151,877, both of which are hereby expressly incorporated by reference. In this embodiment, wells are made in a terminal or distal end of a fiber optic bundle comprising individual fibers. In this embodiment, the cores of the individual fibers are etched, with respect to the cladding, such that small wells or depressions are formed at one end of the fibers. The required depth of the wells will depend on the size of the beads to be added to the wells.

[0093] Generally in this embodiment, the microspheres are non-covalently associated in the wells, although the wells may additionally be chemically functionalized as is generally described below, cross-linking agents may be used, or a physical barrier may be used, i.e. a film or membrane over the beads.

[0094] In a preferred embodiment, the surface of the substrate is modified to contain chemically modified sites, that can be used to attach, either covalently or non-covalently, the microspheres of the invention to the discrete sites or locations on the substrate. "Chemically modified sites" in this context includes, but is not limited to, the addition of a pattern of chemical functional groups including amino groups, carboxy groups, oxo groups and thiol groups, that can be used to covalently attach microspheres, which generally also contain corresponding reactive functional groups; the addition of a pattern of adhesive that can be used to bind the microspheres (either by prior chemical functionalization for the addition of the adhesive or direct addition of the adhesive); the addition of a pattern of charged groups (similar to the chemical functionalities) for the electrostatic attachment of the microspheres, i.e. when the microspheres comprise charged groups opposite to the sites; the addition of a pattern of chemical functional groups that renders the sites differentially hydrophobic or hydrophilic, such that the addition of similarly hydrophobic or hydrophilic microspheres under suitable experimental conditions will result in association of the microspheres to the sites on the basis of hydroaffinity. For example, the use of hydrophobic sites with hydrophobic beads, in an aqueous system, drives the association of the beads preferentially onto the sites. As outlined above, "pattern" in this sense includes the use of a uniform treatment of the surface to allow attachment of the beads at discrete sites, as well as treatment of the surface resulting in discrete sites. As will be appreciated by those in the art, this may be accomplished in a variety of ways.

[0095] In a preferred embodiment, the compositions of the invention further comprise a population of microspheres. By "population" herein is meant a plurality of beads as outlined above for arrays. Within the population are separate subpopulations, which can be a single microsphere or multiple identical microspheres. That is, in some embodiments, as is more fully outlined below, the array may contain only a single bead for each capture probe; preferred embodiments utilize a plurality of beads of each type.

[0096] By "microspheres" or "beads" or "particles" or grammatical equivalents herein is meant small discrete particles. The composition of the beads will vary, depending on the class of capture probe and the method of synthesis. Suitable bead compositions include those used in peptide, nucleic acid and organic moiety synthesis, including, but not limited to, plastics, ceramics, glass, polystyrene, methylstyrene, acrylic polymers, paramagnetic materials, thoria sol, carbon graphite, titanium dioxide, latex or cross-linked dextrans such as Sepharose, cellulose, nylon, cross-linked micelles and Teflon may all be used. "Microsphere Detection Guide" from Bangs Laboratories, Fishers IN is a helpful guide.

[0097] The beads need not be spherical; irregular particles may be used. In addition, the beads may be porous, thus increasing the surface area of the bead available for either capture probe attachment or tag attachment. The bead sizes range from nanometers, i.e. 100 nm, to millimeters, i.e. 1 mm, with beads from about 0.2 micron to about 200 microns being preferred, and from about 0.5 to about 5 micron being particularly preferred, although in some embodiments smaller beads may be used.

[0098] It should be noted that a key component of this embodiment of the invention is the use of a substrate/bead pairing that allows the association or attachment of the beads at discrete sites on the surface of the substrate, such that the beads do not move during the course of the assay.

[0099] Each microsphere comprises a capture probe, although as will be appreciated by those in the art, there may be some microspheres which do not contain a capture probe, depending on the synthetic methods. Alternatively, some have more than one capture probe.

[0100] Attachment of the nucleic acids may be done in a variety of ways, as will be appreciated by those in the art, including, but not limited to, chemical or affinity capture (for example, including the incorporation of derivatized nucleotides such as AminoLink or biotinylated nucleotides that can then be used to attach the nucleic acid to a surface, as well as affinity capture by hybridization), cross-linking, and electrostatic attachment, etc. In a preferred embodiment, affinity capture is used to attach the nucleic acids to the beads. For example, nucleic acids can be derivatized, for example with one member of a binding pair, and the beads derivatized with the other member of a binding pair. Suitable binding pairs are as described herein for IBUDBL pairs. For example, the nucleic acids may be biotinylated (for example using enzymatic incorporate of biotinylated nucleotides, for by photoactivated cross-linking of biotin). Biotinylated nucleic acids can then be captured on streptavidin-coated beads, as is known in the art. Similarly, other hapten-receptor combinations can be used, such as digoxigenin and anti-digoxigenin antibodies. Alternatively, chemical groups can be added in the form of derivatized nucleotides, that can them be used to add the nucleic acid to the surface.

[0101] Preferred attachments are covalent, although even relatively weak interactions (i.e. non-covalent) can be sufficient to attach a nucleic acid to a surface, if there are multiple sites of attachment per each nucleic acid. Thus, for example, electrostatic interactions can be used for attachment, for example by having beads carrying the opposite charge to the bioactive agent.

[0102] Similarly, affinity capture utilizing hybridization can be used to attach nucleic acids to beads. For example, as is known in the art, polyA+RNA is routinely captured by hybridization to oligo-dT beads; this may include oligo-dT capture followed by a cross-linking step, such as psoralen crosslinking). If the nucleic acids of interest do not contain

a polyA tract, one can be attached by polymerization with terminal transferase, or via ligation of an oligoA linker, as is known in the art.

[0103] Alternatively, chemical crosslinking may be done, for example by photoactivated crosslinking of thymidine to reactive groups, as is known in the art.

[0104] In a preferred embodiment, each bead comprises a single type of capture probe, although a plurality of individual capture probes are preferably attached to each bead. Similarly, preferred embodiments utilize more than one microsphere containing a unique capture probe; that is, there is redundancy built into the system by the use of subpopulations of microspheres, each microsphere in the subpopulation containing the same capture probe.

[0105] In an alternative embodiment, each bead comprises a plurality of different capture probes.

[0106] As will be appreciated by those in the art, the capture probes may either be synthesized directly on the beads, or they may be made and then attached after synthesis. In a preferred embodiment, linkers are used to attach the capture probes to the beads, to allow both good attachment, sufficient flexibility to allow good interaction with the target molecule, and to avoid undesirable binding reactions.

[0107] In a preferred embodiment, the capture probes are synthesized directly on the beads. As is known in the art, many classes of chemical compounds are currently synthesized on solid supports, such as peptides, organic moieties, and nucleic acids. It is a relatively straightforward matter to adjust the current synthetic techniques to use beads.

[0108] In a preferred embodiment, the capture probes are synthesized first, and then covalently attached to the beads. As will be appreciated by those in the art, this will be done depending on the composition of the capture probes and the beads. The functionalization of solid support surfaces such as certain polymers with chemically reactive groups such as thiols, amines, carboxyls, etc. is generally known in the art. Accordingly, "blank" microspheres may be used that have surface chemistries that facilitate the attachment of the desired functionality by the user. Some examples of these surface chemistries for blank microspheres include, but are not limited to, amino groups including aliphatic and aromatic amines, carboxylic acids, aldehydes, amides, chloromethyl groups, hydrazide, hydroxyl groups, sulfonates and sulfates.

[0109] In a preferred embodiment the attachment of nucleic acids to substrates includes contacting the oligonucleotide and the solid support in the presence of high salt concentrations. As is appreciated by those skilled in the art, salt includes, but is not limited to sodium chloride, potassium chloride, calcium chloride, magnesium chloride, lithium chloride, rubidium chloride, cesium chloride, barium chloride and the like. In a preferred embodiment, salt as used in the invention includes sodium chloride.

[0110] By high salt concentrations is meant salt that is more concentrated than about 0.1 M salt. In a preferred embodiment, by high salt concentrations is meant greater than about 0.2 M salt. In a particularly preferred embodiment, high salt concentrations include from about 0.5 to 3 M salt, with about 1 M to 2 M being most preferred.

[0111] By solid support or other grammatical equivalents herein is meant any material that can be modified to contain oligonucleotides. As will be appreciated by those in the art, the number of possible solid supports is very large. Possible solid supports include, but are not limited to beads, glass and modified or functionalized glass, plastics (including acrylics, polystyrene and copolymers of styrene and other materials, polypropylene, polyethylene, polybutylene, polyurethanes, Teflon, etc.), polysaccharides, nylon or nitrocellulose, resins, silica or silica-based materials including silicon and modified silicon, carbon, metals, inorganic glasses, plastics, optical fiber bundles, and a variety of other polymers.

[0112] Once formed, the support containing the oligonucleotides finds use in a variety of systems including decoding arrays as described in more detail in U.S. Ser. No. 09/344,526, and U.S. Ser. No. 09/574,117, both of which are expressly incorporated herein by reference. In addition, the support containing the oligonucleotides finds use in microfluidic systems as described in U.S. Ser. No. 09/306,369 which is expressly incorporated herein by reference. In addition, the support containing the oligonucleotides finds use in composite array systems as described in U.S. Ser. No. 09/606,369, which is expressly incorporated herein by reference. In addition the support containing the oligonucleotides finds use in a variety of assays as outlined in more detail in U.S. Ser. Nos. 09/513,362, 09/517,945, 09/535,854, 60/160,917, 60/180,810, 60/182,955, and 09/566,463, all of which are expressly incorporated herein by reference in their entirety. In addition, the support containing the oligonucleotides finds use in array based sensors as described in more detail in 09/287,573, 09/260,963, 09/450,829, 09/151,877, 09/187,289 and 08/519,062, all of which are expressly incorporated herein by reference in their entirety.

[0113] Accordingly the invention provides a method of attaching oligonucleotides to a solid support. The method includes contacting the oligonucleotides with the support in the presence of high salt as described herein. Once attached, as discussed in the examples, the attached oligonucleotides readily hybridize to targets, probes and the like. Attachment of crude oligonucleotides in the presence of high salt is as efficient as attaching purified oligonucleotides. Thus, the invention also contemplates a method of attachment of oligonucleotides to a solid support without prior purification of the oligonucleotides. Again, the method includes contacting the crude oligonucleotides with a solid support in the presence of high salt as described herein.

[0114] The capture probes are designed to be substantially complementary to the adapter sequences, to allow for a minimum of cross reactivity.

[0115] When microsphere arrays are used, an encoding/decoding system must be used. That is, since the beads are generally put onto the substrate randomly, there are several ways to correlate the functionality on the bead with its location, including the incorporation of unique optical signatures, generally fluorescent dyes, that could be used to identify the chemical functionality on any particular bead. This allows the synthesis of the candidate agents (i.e. compounds such as nucleic acids and antibodies) to be divorced from their placement on an array, i.e. the candidate agents may be synthesized on the beads, and then the beads are randomly distributed on a patterned surface. Since the

beads are first coded with an optical signature, this means that the array can later be "decoded", i.e. after the array is made, a correlation of the location of an individual site on the array with the bead or candidate agent at that particular site can be made. This means that the beads may be randomly distributed on the array, a fast and inexpensive process as compared to either the in situ synthesis or spotting techniques of the prior art.

[0116] However, the drawback to these methods is that for a large array, the system requires a large number of different optical signatures, which may be difficult or time-consuming to utilize. Accordingly, the present invention provides several improvements over these methods, generally directed to methods of coding and decoding the arrays. That is, as will be appreciated by those in the art, the placement of the capture probes is generally random, and thus a coding/decoding system is required to identify the probe at each location in the array. This may be done in a variety of ways, as is more fully outlined below, and generally includes: a) the use a decoding binding ligand (DBL), generally directly labeled, that binds to either the capture probe or to identifier binding ligands (IBLs) attached to the beads; b) positional decoding, for example by either targeting the placement of beads (for example by using photoactivatible or photocleavable moieties to allow the selective addition of beads to particular locations), or by using either sub-bundles or selective loading of the sites, as are more fully outlined below; c) selective decoding, wherein only those beads that bind to a target are decoded; or d) combinations of any of these. In some cases, as is more fully outlined below, this decoding may occur for all the beads, or only for those that bind a particular target sequence. Similarly, this may occur either prior to or after addition of a target sequence. In addition, as outlined herein, the target sequences detected may be either a primary target sequence (e.g. a patient sample), or a reaction product from one of the methods described herein (e.g. an extended SBE probe, a ligated probe, a cleaved signal probe, etc.).

[0117] Once the identity (i.e. the actual agent) and location of each microsphere in the array has been fixed, the array is exposed to samples containing the target sequences, although as outlined below, this can be done prior to or during the analysis as well. The target sequences can hybridize (either directly or indirectly) to the capture probes as is more fully outlined below, and results in a change in the optical signal of a particular bead.

[0118] In the present invention, "decoding" may not rely on the use of optical signatures, but rather on the use of decoding binding ligands that are added during a decoding step. The decoding binding ligands will bind either to a distinct identifier binding ligand partner that is placed on the beads, or to the capture probe itself. In this embodiment the decoding binding ligand either is complementary to the capture probe. In this embodiment the decoding binding ligand has the sequence of the adapter that also binds to the capture probe. In a preferred embodiment the decoder binding ligand is a nucleic acid that has the sequence of at least one of the nucleic acids set forth in Table 1.

[0119] The decoding binding ligands are either directly or indirectly labeled, and thus decoding occurs by detecting the presence of the label. By using pools of decoding binding ligands in a sequential fashion, it is possible to greatly minimize the number of required decoding steps.

[0120] In some embodiments, the microspheres may additionally comprise identifier binding ligands for use in certain decoding systems. By "identifier binding ligands" or "IBLs" herein is meant a compound that will specifically bind a corresponding decoder binding ligand (DBL) to facilitate the elucidation of the identity of the capture probe attached to the bead. That is, the IBL and the corresponding DBL form a binding partner pair. By "specifically bind" herein is meant that the IBL binds its DBL with specificity sufficient to differentiate between the corresponding DBL and other DBLs (that is, DBLs for other IBLs), or other components or contaminants of the system. The binding should be sufficient to remain bound under the conditions of the decoding step, including wash steps to remove non-specific binding. In some embodiments, for example when the IBLs and corresponding DBLs are proteins or nucleic acids, the dissociation constants of the IBL to its DBL will be less than about 10^{-4}-10^{-6} M^{-1}, with less than about 10^{-5} to 10^{-9} M^{-1} being preferred and less than about 10^{-7}-10^{-9} M^{-1} being particularly preferred.

[0121] IBL-DBL binding pairs are known or can be readily found using known techniques. For example, when the IBL is a protein, the DBLs include proteins (particularly including antibodies or fragments thereof (FAbs, etc.)) or small molecules, or vice versa (the IBL is an antibody and the DBL is a protein). Metal ion-metal ion ligands or chelators pairs are also useful. Antigen-antibody pairs, enzymes and substrates or inhibitors, other protein-protein interacting pairs, receptor-ligands, complementary nucleic acids, and carbohydrates and their binding partners are also suitable binding pairs. Nucleic acid—nucleic acid binding proteins pairs are also useful. Similarly, as is generally described in U.S. Pat. Nos. 5,270,163, 5,475,096, 5,567,588, 5,595,877, 5,637,459, 5,683,867, 5,705,337, and related patents, hereby incorporated by reference, nucleic acid "aptamers" can be developed for binding to virtually any target; such an aptamer-target pair can be used as the IBL-DBL pair. Similarly, there is a wide body of literature relating to the development of binding pairs based on combinatorial chemistry methods.

[0122] In a preferred embodiment, the IBL is a molecule whose color or luminescence properties change in the presence of a selectively-binding DBL. For example, the IBL may be a fluorescent pH indicator whose emission intensity changes with pH. Similarly, the IBL may be a fluorescent ion indicator, whose emission properties change with ion concentration.

[0123] Alternatively, the IBL is a molecule whose color or luminescence properties change in the presence of various solvents. For example, the IBL may be a fluorescent molecule such as an ethidium salt whose fluorescence intensity increases in hydrophobic environments. Similarly, the IBL may be a derivative of fluorescein whose color changes between aqueous and nonpolar solvents.

[0124] In one embodiment, the DBL may be attached to a bead, i.e. a "decoder bead", that may carry a label such as a fluorophore.

[0125] In a preferred embodiment, the IBL-DBL pair comprise substantially complementary single-stranded nucleic acids. In this embodiment, the binding ligands can be referred to as "identifier probes" and "decoder probes". Generally, the identifier and decoder probes range from

about 4 basepairs in length to about 1000, with from about 6 to about 100 being preferred, and from about 8 to about 40 being particularly preferred. What is important is that the probes are long enough to be specific, i.e. to distinguish between different IBL-DBL pairs, yet short enough to allow both a) dissociation, if necessary, under suitable experimental conditions, and b) efficient hybridization.

[0126] In a preferred embodiment, as is more fully outlined below, the IBLs do not bind to DBLs. Rather, the IBLs are used as identifier moieties ("IMs") that are identified directly, for example through the use of mass spectroscopy.

[0127] Alternatively, in a preferred embodiment, the IBL and the capture probe are the same moiety; thus, for example, as outlined herein, particularly when no optical signatures are used, the capture probe can serve as both the identifier and the agent. For example, in the case of nucleic acids, the bead-bound probe (which serves as the capture probe) can also bind decoder probes, to identify the sequence of the probe on the bead. Thus, in this embodiment, the DBLs bind to the capture probes.

[0128] In one embodiment, the microspheres may contain an optical signature. That is, as outlined in U.S. Ser. Nos. 08/818,199 and 09/151,877, previous work had each subpopulation of microspheres comprising a unique optical signature or optical tag that is used to identify the unique capture probe of that subpopulation of microspheres; that is, decoding utilizes optical properties of the beads such that a bead comprising the unique optical signature may be distinguished from beads at other locations with different optical signatures. Thus the previous work assigned each capture probe a unique optical signature such that any microspheres comprising that capture probe are identifiable on the basis of the signature. These optical signatures comprised dyes, usually chromophores or fluorophores, that were entrapped or attached to the beads themselves. Diversity of optical signatures utilized different fluorochromes, different ratios of mixtures of fluorochromes, and different concentrations (intensities) of fluorochromes.

[0129] In a preferred embodiment, the present invention does not rely solely on the use of optical properties to decode the arrays. However, as will be appreciated by those in the art, it is possible in some embodiments to utilize optical signatures as an additional coding method, in conjunction with the present system. Thus, for example, as is more fully outlined below, the size of the array may be effectively increased while using a single set of decoding moieties in several ways, one of which is the use of optical signatures one some beads. Thus, for example, using one "set" of decoding molecules, the use of two populations of beads, one with an optical signature and one without, allows the effective doubling of the array size. The use of multiple optical signatures similarly increases the possible size of the array.

[0130] In a preferred embodiment, each subpopulation of beads comprises a plurality of different IBLs. By using a plurality of different IBLs to encode each capture probe, the number of possible unique codes is substantially increased. That is, by using one unique IBL per capture probe. the size of the array will be the number of unique IBLs (assuming no "reuse" occurs, as outlined below). However, by using a plurality of different IBLs per bead, n, the size of the array can be increased to 2^n, when the presence or absence of each IBL is used as the indicator. For example, the assignment of 10 IBLs per bead generates a bit binary code, where each bit can be designated as "1" (IBL is present) or "0" (IBL is absent). A 10 bit binary code has 2^{10} possible variants However, as is more fully discussed below, the size of the array may be further increased if another parameter is included such as concentration or intensity; thus for example, if two different concentrations of the IBL are used, then the array size increases as 3^n. Thus, in this embodiment, each individual capture probe in the array is assigned a combination of IBLs, which can be added to the beads prior to the addition of the capture probe, after, or during the synthesis of the capture probe, i.e. simultaneous addition of IBLs and capture probe components.

[0131] Alternatively, the combination of different IBLs can be used to elucidate the sequence of the nucleic acid. Thus, for example, using two different IBLs (IBL1 and IBL2), the first position of a nucleic acid can be elucidated: for example, adenosine can be represented by the presence of both IBL1 and IBL2; thymidine can be represented by the presence of IBL1 but not IBL2, cytosine can be represented by the presence of IBL2 but not IBL1, and guanosine can be represented by the absence of both. The second position of the nucleic acid can be done in a similar manner using IBL3 and IBL4; thus, the presence of IBL1, IBL2, IBL3 and IBL4 gives a sequence of AA; IBL1, IBL2, and IBL3 shows the sequence AT; IBL1, IBL3 and IBL4 gives the sequence TA, etc. The third position utilizes IBL5 and IBL6, etc. In this way, the use of 20 different identifiers can yield a unique code for every possible 10-mer.

[0132] In this way, a sort of "bar code" for each sequence can be constructed; the presence or absence of each distinct IBL will allow the identification of each capture probe.

[0133] In addition, the use of different concentrations or densities of IBLs allows a "reuse" of sorts. If, for example, the bead comprising a first agent has a 1× concentration of IBL, and a second bead comprising a second agent has a 1× concentration of IBL, using saturating concentrations of the corresponding labelled DBL allows the user to distinguish between the two beads.

[0134] Once the microspheres comprising the capture probes are generated, they are added to the substrate to form an array. It should be noted that while most of the methods described herein add the beads to the substrate prior to the assay, the order of making, using and decoding the array can vary. For example, the array can be made, decoded, and then the assay done. Alternatively, the array can be made, used in an assay, and then decoded; this may find particular use when only a few beads need be decoded. Alternatively, the beads can be added to the assay mixture, i.e. the sample containing the target sequences, prior to the addition of the beads to the substrate; after addition and assay, the array may be decoded. This is particularly preferred when the sample comprising the beads is agitated or mixed; this can increase the amount of target sequence bound to the beads per unit time, and thus (in the case of nucleic acid assays) increase the hybridization kinetics. This may find particular use in cases where the concentration of target sequence in the sample is low; generally, for low concentrations, long binding times must be used.

[0135] In general, the methods of making the arrays and of decoding the arrays is done to maximize the number of

different candidate agents that can be uniquely encoded. The compositions of the invention may be made in a variety of ways. In general, the arrays are made by adding a solution or slurry comprising the beads to a surface containing the sites for attachment of the beads. This may be done in a variety of buffers, including aqueous and organic solvents, and mixtures. The solvent can evaporate, and excess beads are removed.

[0136] In a preferred embodiment, when non-covalent methods are used to associate the beads with the array, a novel method of loading the beads onto the array is used. This method comprises exposing the array to a solution of particles (including microspheres and cells) and then applying energy, e.g. agitating or vibrating the mixture. This results in an array comprising more tightly associated particles, as the agitation is done with sufficient energy to cause weakly-associated beads to fall off (or out, in the case of wells). These sites are then available to bind a different bead. In this way, beads that exhibit a high affinity for the sites are selected. Arrays made in this way have two main advantages as compared to a more static loading: first of all, a higher percentage of the sites can be filled easily, and secondly, the arrays thus loaded show a substantial decrease in bead loss during assays. Thus, in a preferred embodiment, these methods are used to generate arrays that have at least about 50% of the sites filled, with at least about 75% being preferred, and at least about 90% being particularly preferred. Similarly, arrays generated in this manner preferably lose less than about 20% of the beads during an assay, with less than about 10% being preferred and less than about 5% being particularly preferred.

[0137] In this embodiment, the substrate comprising the surface with the discrete sites is immersed into a solution comprising the particles (beads, cells, etc.). The surface may comprise wells, as is described herein, or other types of sites on a patterned surface such that there is a differential affinity for the sites. This differnetial affinity results in a competitive process, such that particles that will associate more tightly are selected. Preferably, the entire surface to be "loaded" with beads is in fluid contact with the solution. This solution is generally a slurry ranging from about 10,000:1 beads:solution (vol:vol) to 1:1. Generally, the solution can comprise any number of reagents, including aqueous buffers, organic solvents, salts, other reagent components, etc. In addition, the solution preferably comprises an excess of beads; that is, there are more beads than sites on the array. Preferred embodiments utilize two-fold to billion-fold excess of beads.

[0138] The immersion can mimic the assay conditions; for example, if the array is to be "dipped" from above into a microtiter plate comprising samples, this configuration can be repeated for the loading, thus minimizing the beads that are likely to fall out due to gravity.

[0139] Once the surface has been immersed, the substrate, the solution, or both are subjected to a competitive process, whereby the particles with lower affinity can be disassociated from the substrate and replaced by particles exhibiting a higher affinity to the site. This competitive process is done by the introduction of energy, in the form of heat, sonication, stirring or mixing, vibrating or agitating the solution or substrate, or both.

[0140] A preferred embodiment utilizes agitation or vibration. In general, the amount of manipulation of the substrate is minimized to prevent damage to the array; thus, preferred embodiments utilize the agitation of the solution rather than the array, although either will work. As will be appreciated by those in the art, this agitation can take on any number of forms, with a preferred embodiment utilizing microtiter plates comprising bead solutions being agitated using microtiter plate shakers.

[0141] The agitation proceeds for a period of time sufficient to load the array to a desired fill. Depending on the size and concentration of the beads and the size of the array, this time may range from about 1 second to days, with from about 1 minute to about 24 hours being preferred.

[0142] It should be noted that not all sites of an array may comprise a bead; that is, there may be some sites on the substrate surface which are empty. In addition, there may be some sites that contain more than one bead, although this is not preferred.

[0143] In some embodiments, for example when chemical attachment is done, it is possible to attach the beads in a non-random or ordered way. For example, using photoactivatible attachment linkers or photoactivatible adhesives or masks, selected sites on the array may be sequentially rendered suitable for attachment, such that defined populations of beads are laid down.

[0144] The arrays of the present invention are constructed such that information about the identity of the capture probe is built into the array, such that the random deposition of the beads in the fiber wells can be "decoded" to allow identification of the capture probe at all positions. This may be done in a variety of ways, and either before, during or after the use of the array to detect target molecules.

[0145] Thus, after the array is made, it is "decoded" in order to identify the location of one or more of the capture probes, i.e. each subpopulation of beads, on the substrate surface.

[0146] In a preferred embodiment, pyrosequencing techniques are used to decode the array, as is generally described in "Nucleic Acid Sequencing using Microsphere Arrays", filed Oct. 22, 1999 (no U.S. Ser. No. received yet), hereby incorporated by reference.

[0147] In a preferred embodiment, a selective decoding system is used. In this case, only those microspheres exhibiting a change in the optical signal as a result of the binding of a target sequence are decoded. This is commonly done when the number of "hits", i.e. the number of sites to decode, is generally low. That is, the array is first scanned under experimental conditions in the absence of the target sequences. The sample containing the target sequences is added, and only those locations exhibiting a change in the optical signal are decoded. For example, the beads at either the positive or negative signal locations may be either selectively tagged or released from the array (for example through the use of photocleavable linkers), and subsequently sorted or enriched in a fluorescence-activated cell sorter (FACS). That is, either all the negative beads are released, and then the positive beads are either released or analyzed in situ, or alternatively all the positives are released and analyzed. Alternatively, the labels may comprise halogenated aromatic compounds, and detection of the label is done using for example gas chromatography, chemical tags, isotopic tags mass spectral tags.

[0148] As will be appreciated by those in the art, this may also be done in systems where the array is not decoded; i.e. there need not ever be a correlation of bead composition with location. In this embodiment, the beads are loaded on the array, and the assay is run. The "positives", i.e. those beads displaying a change in the optical signal as is more fully outlined below, are then "marked" to distinguish or separate them from the "negative" beads. This can be done in several ways, preferably using fiber optic arrays. In a preferred embodiment, each bead contains a fluorescent dye. After the assay and the identification of the "positives" or "active beads", light is shown down either only the positive fibers or only the negative fibers, generally in the presence of a light-activated reagent (typically dissolved oxygen). In the former case, all the active beads are photobleached. Thus, upon non-selective release of all the beads with subsequent sorting, for example using a fluorescence activated cell sorter (FACS) machine, the non-fluorescent active beads can be sorted from the fluorescent negative beads. Alternatively, when light is shown down the negative fibers, all the negatives are non-fluorescent and the the postives are fluorescent, and sorting can proceed. The characterization of the attached capture probe may be done directly, for example using mass spectroscopy.

[0149] Alternatively, the identification may occur through the use of identifier moieties ("IMs"), which are similar to IBLs but need not necessarily bind to DBLs. That is, rather than elucidate the structure of the capture probe directly, the composition of the IMs may serve as the identifier. Thus, for example, a specific combination of IMs can serve to code the bead, and be used to identify the agent on the bead upon release from the bead followed by subsequent analysis, for example using a gas chromatograph or mass spectroscope.

[0150] Alternatively, rather than having each bead contain a fluorescent dye, each bead comprises a non-fluorescent precursor to a fluorescent dye. For example, using photocleavable protecting groups, such as certain ortho-nitrobenzyl groups, on a fluorescent molecule, photoactivation of the fluorochrome can be done. After the assay, light is shown down again either the "positive" or the "negative" fibers, to distinguish these populations. The illuminated precursors are then chemically converted to a fluorescent dye. All the beads are then released from the array, with sorting, to form populations of fluorescent and non-fluorescent beads (either the positives and the negatives or vice versa).

[0151] In an alternate preferred embodiment, the sites of attachment of the beads (for example the wells) include a photopolymerizable reagent, or the photopolymerizable agent is added to the assembled array. After the test assay is run, light is shown down again either the "positive" or the "negative" fibers, to distinguish these populations. As a result of the irradiation, either all the positives or all the negatives are polymerized and trapped or bound to the sites, while the other population of beads can be released from the array.

[0152] In a preferred embodiment, the location of every capture probe is determined using decoder binding ligands (DBLs). As outlined above, DBLs are binding ligands that will either bind to identifier binding ligands, if present, or to the capture probes themselves, preferably when the capture probe is a nucleic acid or protein.

[0153] In a preferred embodiment, as outlined above, the DBL binds to the IBL.

[0154] In a preferred embodiment, the capture probes are single-stranded nucleic acids and the DBL is a substantially complementary single-stranded nucleic acid that binds (hybridizes) to the capture probe, termed a decoder probe herein. A decoder probe that is substantially complementary to each candidate probe is made and used to decode the array. In this embodiment, the candidate probes and the decoder probes should be of sufficient length (and the decoding step run under suitable conditions) to allow specificity; i.e. each candidate probe binds to its corresponding decoder probe with sufficient specificity to allow the distinction of each candidate probe.

[0155] In a preferred embodiment, the DBLs are either directly or indirectly labeled. In a preferred embodiment, the DBL is directly labeled, that is, the DBL comprises a label. In an alternate embodiment, the DBL is indirectly labeled; that is, a labeling binding ligand (LBL) that will bind to the DBL is used. In this embodiment, the labeling binding ligand-DBL pair can be as described above for IBL-DBL pairs.

[0156] Accordingly, the identification of the location of the individual beads (or subpopulations of beads) is done using one or more decoding steps comprising a binding between the labeled DBL and either the IBL or the capture probe (i.e. a hybridization between the candidate probe and the decoder probe when the capture probe is a nucleic acid). After decoding, the DBLs can be removed and the array can be used; however, in some circumstances, for example when the DBL binds to an IBL and not to the capture probe, the removal of the DBL is not required (although it may be desirable in some circumstances). In addition, as outlined herein, decoding may be done either before the array is used to in an assay, during the assay, or after the assay.

[0157] In one embodiment, a single decoding step is done. In this embodiment, each DBL is labeled with a unique label, such that the the number of unique tags is equal to or greater than the number of capture probes (although in some cases, "reuse" of the unique labels can be done, as described herein; similarly, minor variants of candidate probes can share the same decoder, if the variants are encoded in another dimension, i.e. in the bead size or label). For each capture probe or IBL, a DBL is made that will specifically bind to it and contains a unique tag, for example one or more fluorochromes. Thus, the identity of each DBL, both its composition (i.e. its sequence when it is a nucleic acid) and its label, is known. Then, by adding the DBLs to the array containing the capture probes under conditions which allow the formation of complexes (termed hybridization complexes when the components are nucleic acids) between the DBLs and either the capture probes or the IBLs, the location of each DBL can be elucidated. This allows the identification of the location of each capture probe; the random array has been decoded. The DBLs can then be removed, if necessary, and the target sample applied.

[0158] In a preferred embodiment, the number of unique labels is less than the number of unique capture probes, and thus a sequential series of decoding steps are used. In this embodiment, decoder probes are divided into n sets for decoding. The number of sets corresponds to the number of unique tags. Each decoder probe is labeled in n separate reactions with n distinct tags. All the decoder probes share the same n tags. The decoder probes are pooled so that each

pool contains only one of the n tag versions of each decoder, and no two decoder probes have the same sequence of tags across all the pools. The number of pools required for this to be true is determined by the number of decoder probes and the n. Hybridization of each pool to the array generates a signal at every address. The sequential hybridization of each pool in turn will generate a unique, sequence-specific code for each candidate probe. This identifies the candidate probe at each address in the array. For example, if four tags are used, then 4×n sequential hybridizations can ideally distinguish 4^n sequences, although in some cases more steps may be required. After the hybridization of each pool, the hybrids are denatured and the decoder probes removed, so that the probes are rendered single-stranded for the next hybridization (although it is also possible to hybridize limiting amounts of target so that the available probe is not saturated. Sequential hybridizations can be carried out and analyzed by subtracting pre-existing signal from the previous hybridization).

[0159] An example is illustrative. Assuming an array of 16 probe nucleic acids (numbers 1-16), and four unique tags (four different fluors, for example; labels A-D). Decoder probes 1-16 are made that correspond to the probes on the beads. The first step is to label decoder probes 1-4 with tag A, decoder probes 5-8 with tag B, decoder probes 9-12 with tag C, and decoder probes 13-16 with tag D. The probes are mixed and the pool is contacted with the array containing the beads with the attached candidate probes. The location of each tag (and thus each decoder and candidate probe pair) is then determined. The first set of decoder probes are then removed. A second set is added, but this time, decoder probes 1, 5, 9 and 13 are labeled with tag A, decoder probes 2, 6, 10 and 14 are labeled with tag B, decoder probes 3, 7, 11 and 15 are labeled with tag C, and decoder probes 4, 8, 12 and 16 are labeled with tag D. Thus, those beads that contained tag A in both decoding steps contain candidate probe 1; tag A in the first decoding step and tag B in the second decoding step contain candidate probe 2; tag A in the first decoding step and tag C in the second step contain candidate probe 3; etc. In one embodiment, the decoder probes are labeled in situ; that is, they need not be labeled prior to the decoding reaction. In this embodiment, the incoming decoder probe is shorter than the candidate probe, creating a 5'"overhang" on the decoding probe. The addition of labeled ddNTPs (each labeled with a unique tag) and a polymerase will allow the addition of the tags in a sequence specific manner, thus creating a sequence-specific pattern of signals. Similarly, other modifications can be done, including ligation, etc.

[0160] In addition, since the size of the array will be set by the number of unique decoding binding ligands, it is possible to "reuse" a set of unique DBLs to allow for a greater number of test sites. This may be done in several ways; for example, by using some subpopulations that comprise optical signatures. Similarly, the use of a positional coding scheme within an array; different sub-bundles may reuse the set of DBLs. Similarly, one embodiment utilizes bead size as a coding modality, thus allowing the reuse of the set of unique DBLs for each bead size. Alternatively, sequential partial loading of arrays with beads can also allow the reuse of DBLs. Furthermore, "code sharing" can occur as well.

[0161] In a preferred embodiment, the DBLs may be reused by having some subpopulations of beads comprise optical signatures. In a preferred embodiment, the optical signature is generally a mixture of reporter dyes, preferably flourescent. By varying both the composition of the mixture (i.e. the ratio of one dye to another) and the concentration of the dye (leading to differences in signal intensity), matrices of unique optical signatures may be generated. This may be done by covalently attaching the dyes to the surface of the beads, or alternatively, by entrapping the dye within the bead.

[0162] In a preferred embodiment, the encoding can be accomplished in a ratio of at least two dyes, although more encoding dimensions may be added in the size of the beads, for example. In addition, the labels are distinguishable from one another; thus two different labels may comprise different molecules (i.e. two different fluors) or, alternatively, one label at two different concentrations or intensity.

[0163] In a preferred embodiment, the dyes are covalently attached to the surface of the beads. This may be done as is generally outlined for the attachment of the capture probes, using functional groups on the surface of the beads. As will be appreciated by those in the art, these attachments are done to minimize the effect on the dye.

[0164] In a preferred embodiment, the dyes are non-covalently associated with the beads, generally by entrapping the dyes in the pores of the beads.

[0165] Additionally, encoding in the ratios of the two or more dyes, rather than single dye concentrations, is preferred since it provides insensitivity to the intensity of light used to interrogate the reporter dye's signature and detector sensitivity.

[0166] In a preferred embodiment, a spatial or positional coding system is done. In this embodiment, there are sub-bundles or subarrays (i.e. portions of the total array) that are utilized. By analogy with the telephone system, each subarray is an "area code", that can have the same tags (i.e. telephone numbers) of other subarrays, that are separated by virtue of the location of the subarray. Thus, for example, the same unique tags can be reused from bundle to bundle. Thus, the use of 50 unique tags in combination with 100 different subarrays can form an array of 5000 different capture probes. In this embodiment, it becomes important to be able to identify one bundle from another; in general, this is done either manually or through the use of marker beads, i.e. beads containing unique tags for each subarray.

[0167] In alternative embodiments, additional encoding parameters can be added, such as microsphere size. For example, the use of different size beads may also allow the reuse of sets of DBLs; that is, it is possible to use microspheres of different sizes to expand the encoding dimensions of the microspheres. Optical fiber arrays can be fabricated containing pixels with different fiber diameters or cross-sections; alternatively, two or more fiber optic bundles, each with different cross-sections of the individual fibers, can be added together to form a larger bundle; or, fiber optic bundles with fiber of the same size cross-sections can be used, but just with different sized beads. With different diameters, the largest wells can be filled with the largest microspheres and then moving onto progressively smaller microspheres in the smaller wells until all size wells are then filled. In this manner, the same dye ratio could be used to encode microspheres of different sizes thereby expanding

the number of different oligonucleotide sequences or chemical functionalities present in the array. Although outlined for fiber optic substrates, this as well as the other methods outlined herein can be used with other substrates and with other attachment modalities as well.

[0168] In a preferred embodiment, the coding and decoding is accomplished by sequential loading of the microspheres into the array. As outlined above for spatial coding, in this embodiment, the optical signatures can be "reused". In this embodiment, the library of microspheres each comprising a different capture probe (or the subpopulations each comprise a different capture probe), is divided into a plurality of sublibraries; for example, depending on the size of the desired array and the number of unique tags, 10 sublibraries each comprising roughly 10% of the total library may be made, with each sublibrary comprising roughly the same unique tags. Then, the first sublibrary is added to the fiber optic bundle comprising the wells, and the location of each capture probe is determined, generally through the use of DBLs. The second sublibrary is then added, and the location of each capture probe is again determined. The signal in this case will comprise the signal from the "first" DBL and the "second" DBL; by comparing the two matrices the location of each bead in each sublibrary can be determined. Similarly, adding the third, fourth, etc. sublibraries sequentially will allow the array to be filled.

[0169] In a preferred embodiment, codes can be "shared" in several ways. In a first embodiment, a single code (i.e. IBL/DBL pair) can be assigned to two or more agents if the target sequences different sufficiently in their binding strengths. For example, two nucleic acid probes used in an mRNA a quantitation assay can share the same code if the ranges of their hybridization signal intensities do not overlap. This can occur, for example, when one of the target sequences is always present at a much higher concentration than the other. Alternatively, the two target sequences might always be present at a similar concentration, but differ in hybridization efficiency.

[0170] Alternatively, a single code can be assigned to multiple agents if the agents are functionally equivalent. For example, if a set of oligonucleotide probes are designed with the common purpose of detecting the presence of a particular gene, then the probes are functionally equivalent, even though they may differ in sequence. Similarly, an array of this type could be used to detect homologs of known genes. In this embodiment, each gene is represented by a heterologous set of probes, hybridizing to different regions of the gene (and therefore differing in sequence). The set of probes share a common code. If a homolog is present, it might hybridize to some but not all of the probes. The level of homology might be indicated by the fraction of probes hybridizing, as well as the average hybridization intensity. Similarly, multiple antibodies to the same protein could all share the same code.

[0171] In a preferred embodiment, decoding of self-assembled random arrays is done on the bases of pH titration. In this embodiment, in addition to capture probes, the beads comprise optical signatures, wherein the optical signatures are generated by the use of pH-responsive dyes (sometimes referred to herein as "ph dyes") such as fluorophores. This embodiment is similar to that outlined in PCT US98/05025 and U.S. Ser. No. 09/151,877, both of which are expressly incorporated by reference, except that the dyes used in the present ivention exhibits changes in fluorescence intensity (or other properties) when the solution pH is adjusted from below the pKa to above the pKa (or vice versa). In a preferred embodiment, a set of pH dyes are used, each with a different pKa, preferably separated by at least 0.5 pH units. Preferred embodiments utilize a pH dye set of pka's of 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.5, 11, and 11.5. Each bead can contain any subset of the pH dyes, and in this way a unique code for the capture probe is generated. Thus, the decoding of an array is achieved by titrating the array from pH 1 to pH 13, and measuring the fluorescence signal from each bead as a function of solution pH.

[0172] Thus, the present invention provides array compositions comprising a substrate with a surface comprising discrete sites. A population of microspheres is distributed on the sites, and the population comprises at least a first and a second subpopulation. Each subpopulation comprises a capture probe, and, in addition, at least one optical dye with a given pKa. The pKas of the different optical dyes are different.

[0173] In a preferred embodiment, "random" decoding probes can be made. By sequential hybridizations or the use of multiple labels, as is outlined above, a unique hybridization pattern can be generated for each sensor element. This allows all the beads representing a given clone to be identified as belonging to the same group. In general, this is done by using random or partially degenerate decoding probes, that bind in a sequence-dependent but not highly sequence-specific manner. The process can be repeated a number of times, each time using a different labeling entity, to generate a different pattern of singals based on quasi-specific interactions. In this way, a unique optical signature is eventually built up for each sensor element. By applying pattern recognition or clustering algorithms to the optical signatures, the beads can be grouped into sets that share the same signature (i.e. carry the same probes).

[0174] In order to identify the actual sequence of the clone itself, additional procedures are required; for example, direct sequencing can be done, or an ordered array containing the clones, such as a spotted cDNA array, to generate a "key" that links a hybridization pattern to a specific clone.

[0175] Alternatively, clone arrays can be decoded using binary decoding with vector tags. For example, partially randomized oligos are cloned into a nucleic acid vector (e.g. plasmid, phage, etc.). Each oligonucleotide sequence consists of a subset of a limited set of sequences. For example, if the limites set comprises 10 sequences, each oligonucleotide may have some subset (or all of the 10) sequences. Thus each of the 10 sequences can be present or absent in the oligonucleotide. Therefore, there are 2^{10} or 1,024 possible combinations. The sequences may overlap, and minor variants can also be represented (e.g. A, C, T and G substitutions) to increase the number of possible combinations. A nucleic acid library is cloned into a vector containing the random code sequences. Alternatively, other methods such as PCR can be used to add the tags. In this way it is possible to use a small number of oligo decoding probes to decode an array of clones.

[0176] As will be appreciated by those in the art, the systems of the invention may take on a large number of

different configurations, as is generally depicted in the Figures. In general, there are three types of systems that can be used: (1) "non-sandwich" systems (also referred to herein as "direct" detection) in which the target sequence itself is labeled with detectable labels (again, either because the primers comprise labels or due to the incorporation of labels into the newly synthesized strand); (2) systems in which label probes directly bind to the target analytes; and (3) systems in which label probes are indirectly bound to the target sequences, for example through the use of amplifier probes.

[0177] Detection of the reactions of the invention, including the direct detection of products and indirect detection utilizing label probes (i.e. sandwich assays), is preferably done by detecting assay complexes comprising detectable labels, which can be attached to the assay complex in a variety of ways.

[0178] In a preferred embodiment, an array of different and usually artificial capture probes are made; that is, the capture probes do not have complementarity to known target sequences. The adapter sequences can then be added to any target sequences, or soluble capture extender probes are made; this allows the manufacture of only one kind of array, with the user able to customize the array through the use of adapter sequences or capture extender probes. This then allows the generation of customized soluble probes, which as will be appreciated by those in the art is generally simpler and less costly.

[0179] When capture extender probes are used, in one embodiment, microsphere arrays containing a single type of capture probe are made; in this embodiment, the capture extender probes are added to the beads prior to loading on the array. The capture extender probes may be additionally fixed or crosslinked, as necessary.

[0180] Accordingly, the present invention provides compositions and methods for detecting the presence or absence of target analytes, including nucleic acid sequences, in a sample. As will be appreciated by those in the art, the sample solution may comprise any number of things, including, but not limited to, bodily fluids (including, but not limited to, blood, urine, serum, lymph, saliva, anal and vaginal secretions, perspiration and semen, of virtually any organism, with mammalian samples being preferred and human samples being particularly preferred); environmental samples (including, but not limited to, air, agricultural, water and soil samples); biological warfare agent samples; research samples (i.e. in the case of nucleic acids, the sample may be the products of an amplification reaction, including both target and signal amplification); purified samples, such as purified genomic DNA, RNA, proteins, etc.; raw samples (bacteria, virus, genomic DNA, etc.; As will be appreciated by those in the art, virtually any experimental manipulation may have been done on the sample.

[0181] The present invention provides compositions and methods for detecting the presence or absence of target nucleic acid sequences in a sample.

[0182] In a preferred embodiment, several levels of redundancy are built into the arrays of the invention. Building redundancy into an array gives several significant advantages, including the ability to make quantitative estimates of confidence about the data and signficant increases in sensitivity. Thus, preferred embodiments utilize array redundancy. As will be appreciated by those in the art, there are at least two types of redundancy that can be built into an array: the use of multiple identical sensor elements (termed herein "sensor redundancy"), and the use of multiple sensor elements directed to the same target analyte, but comprising different chemical functionalities (termed herein "target redundancy"). For example, for the detection of nucleic acids, sensor redundancy utilizes of a plurality of sensor elements such as beads comprising identical binding ligands such as probes. Target redundancy utilizes sensor elements with different probes to the same target: one probe may span the first 25 bases of the target, a second probe may span the second 25 bases of the target, etc. By building in either or both of these types of redundancy into an array, significant benefits are obtained. For example, a variety of statistical mathematical analyses may be done.

[0183] In addition, while this is generally described herein for bead arrays, as will be appreciated by those in the art, this techniques can be used for any type of arrays designed to detect target analytes. Furthermore, while these techniques are generally described for nucleic acid systems, these techniques are useful in the detection of other binding ligand/target analyte systems as well.

[0184] In a preferred embodiment, sensor redundancy is used. In this embodiment, a plurality of sensor elements, e.g. beads, comprising identical bioactive agents are used. That is, each subpopulation comprises a plurality of beads comprising identical bioactive agents (e.g. binding ligands). By using a number of identical sensor elements for a given array, the optical signal from each sensor element can be combined and any number of statistical analyses run, as outlined below. This can be done for a variety of reasons. For example, in time varying measurements, redundancy can significantly reduce the noise in the system. For non-time based measurements, redundancy can significantly increase the confidence of the data.

[0185] In a preferred embodiment, a plurality of identical sensor elements are used. As will be appreciated by those in the art, the number of identical sensor elements will vary with the application and use of the sensor array. In general, anywhere from 2 to thousands may be used, with from 2 to 100 being preferred, 2 to 50 being particularly preferred and from 5 to 20 being especially preferred. In general, preliminary results indicate that roughly 10 beads gives a sufficient advantage, although for some applications, more identical sensor elements can be used.

[0186] Once obtained, the optical response signals from a plurality of sensor beads within each bead subpopulation can be manipulated and analyzed in a wide variety of ways, including baseline adjustment, averaging, standard deviation analysis, distribution and cluster analysis, confidence interval analysis, mean testing, etc.

[0187] In a preferred embodiment, the first manipulation of the optical response signals is an optional baseline adjustment. In a typical procedure, the standardized optical responses are adjusted to start at a value of 0.0 by subtracting the integer 1.0 from all data points. Doing this allows the baseline-loop data to remain at zero even when summed together and the random response signal noise is canceled out. When the sample is a fluid, the fluid pulse-loop temporal region, however, frequently exhibits a characteristic change

in response, either positive, negative or neutral, prior to the sample pulse and often requires a baseline adjustment to overcome noise associated with drift in the first few data points due to charge buildup in the CCD camera. If no drift is present, typically the baseline from the first data point for each bead sensor is subtracted from all the response data for the same bead. If drift is observed, the average baseline from the first ten data points for each bead sensor is substracted from the all the response data for the same bead. By applying this baseline adjustment, when multiple bead responses are added together they can be amplified while the baseline remains at zero. Since all beads respond at the same time to the sample (e.g. the sample pulse), they all see the pulse at the exact same time and there is no registering or adjusting needed for overlaying their responses. In addition, other types of baseline adjustment may be done, depending on the requirements and output of the system used.

[0188] Once the baseline has been adjusted, a number of possible statistical analyses may be run to generate known statistical parameters. Analyses based on redundancy are known and generally described in texts such as Freund and Walpole, Mathematical Statistics, Prentice Hall, Inc. New Jersey, 1980, hereby incorporated by reference in its entirety.

[0189] In a preferred embodiment, signal summing is done by simply adding the intensity values of all responses at each time point, generating a new temporal response comprised of the sum of all bead responses. These values can be baseline-adjusted or raw. As for all the analyses described herein, signal summing can be performed in real time or during post-data acquisition data reduction and analysis. In one embodiment, signal summing is performed with a commercial spreadsheet program (Excel, Microsoft, Redmond, Wash.) after optical response data is collected.

[0190] Methods for signal summing and analyses are included in U.S. Ser. No. 08/944,850, filed Oct. 6, 1997; 09/287,573, filed Apr. 6, 1999; and 60/238,866, filed Oct. 6, 2000; an PCT Nos. US98/21193, filed Oct. 6, 1998; and US00/09183, filed Apr. 6, 2000.

[0191] Once made, the methods and compositions of the invention find use in a number of applications. In a preferred embodiment, the compositions are used to probe a sample solution for the presence or absence of a target sequence, including the quantification of the amount of target sequence present. The compositions and methods find utility in the detection of genotyping assays and sequencing assays, and in all sorts of target analyte assays, including immunoassays.

[0192] For SNP analysis, the ratio of different labels at a particular location on the array indicates the homozygosity or heterozygosity of the target sample, assuming the same concentration of each readout probe is used. Thus, for example, assuming a first readout probe comprising a first base at the readout position with a first detectable label and a second readout probe comprising a second base at the readout position with a second detectable label, equal signals (roughly 1:1 (taking into account the different signal intensities of the different labels, different hybridization efficiencies, and other reasons)) of the first and second labels indicates a heterozygote. The absence of a signal from the first label (or a ratio of approximately 0:1) indicates a homozygote of the second detection base; the absence of a signal from the second label (or a ratio of approximately 1:0) indicates a homozygote for the first detection base. As is appreciated by those in the art, the actual ratios for any particular system are generally determined empirically.

[0193] Generally, a sample containing a target analyte (whether for detection of the target analyte or screening for binding partners of the target analyte) is added to the array, under conditions suitable for binding of the target analyte to at least one of the capture probes, i.e. generally physiological conditions. The presence or absence of the target analyte is then detected. As will be appreciated by those in the art, this may be done in a variety of ways, generally through the use of a change in an optical signal. This change can occur via many different mechanisms. A few examples include the binding of a dye-tagged analyte to the bead, the production of a dye species on or near the beads, the destruction of an existing dye species, a change in the optical signature upon analyte interaction with dye on bead, or any other optical interrogatable event.

[0194] In a preferred embodiment, the change in optical signal occurs as a result of the binding of a target analyte that is labeled, either directly or indirectly, with a detectable label, preferably an optical label such as a fluorochrome. Thus, for example, when a proteinaceous target analyte is used, it may be either directly labeled with a fluor, or indirectly, for example through the use of a labeled antibody. Similarly, nucleic acids are easily labeled with fluorochromes, for example during PCR amplification as is known in the art. Alternatively, upon binding of the target sequences, a hybridization indicator may be used as the label. Hybridization indicators preferentially associate with double stranded nucleic acid, usually reversibly. Hybridization indicators include intercalators and minor and/or major groove binding moieties. In a preferred embodiment, intercalators may be used; since intercalation generally only occurs in the presence of double stranded nucleic acid, only in the presence of target hybridization will the label light up. Thus, upon binding of the target analyte to a capture probe, there is a new optical signal generated at that site, which then may be detected.

[0195] Alternatively, in some cases, as discussed above, the target analyte such as an enzyme generates a species that is either directly or indirectly optical detectable.

[0196] Furthermore, in some embodiments, a change in the optical signature may be the basis of the optical signal. For example, the interaction of some chemical target analytes with some fluorescent dyes on the beads may alter the optical signature, thus generating a different optical signal.

[0197] As will be appreciated by those in the art, in some embodiments, the presence or absence of the target analyte may be done using changes in other optical or non-optical signals, including, but not limited to, surface enhanced Raman spectroscopy, surface plasmon resonance, radioactivity, etc.

[0198] The assays may be run under a variety of experimental conditions, as will be appreciated by those in the art. A variety of other reagents may be included in the screening assays. These include reagents like salts, neutral proteins, e.g. albumin, detergents, etc which may be used to facilitate optimal protein-protein binding and/or reduce non-specific or background interactions. Also reagents that otherwise improve the efficiency of the assay, such as protease inhibitors, nuclease inhibitors, anti-microbial agents, etc., may be

used. The mixture of components may be added in any order that provides for the requisite binding. Various blocking and washing steps may be utilized as is known in the art.

[0199] The following examples serve to more fully describe the manner of using the above-described invention, as well as to set forth the best modes contemplated for carrying out various aspects of the invention. It is understood that these examples in no way serve to limit the true scope of this invention, but rather are presented for illustrative purposes. All references cited herein are incorporated by reference in their entirety.

EXAMPLES

Example 1

[0200] Immobilization of Crude Oligonucleotides to a Solid Support

[0201] 1. Introduce chemical functional group (such as —NH2, —COOH, —NCO, —NHS, —SH, —CHO, etc.) onto solid support.

[0202] 2. Activate the functional group before oligonucleotide attachment.

[0203] 3. 5'-terminal modified oligonucleotide attachment.

[0204] Crude Oligonucleotides were attached to supports and compared to results from attachment of purified oligonucleotides. As demonstrated in **FIG. 3**, in the presence of 2 M salt, crude oligonucleotides were immobilized as efficiently as purified oligonucleotides.

[0205] IN addition, the improved attachment of oligonucleotides to a solid support in the presence of increased salt was sequence and length independent. Thus, the method finds use in attachment of all oligonucleotides to a solid support (see **FIG. 4**).

[0206] In addition, when 0.5 M to 3 M NaCl was used for attachment of oligonucleotides, non-purified oligonucleotides were attached with comparable efficiency when compared to purified oligonucleotides (see **FIG. 5**).

TABLE 1

Seq. ID No.	Decoder (5'-3')
17	GGCTGGTTCGGCCCGAAAGCTTAG
18	GTTCCCAGTGAAGCTGCGATCTGG
19	TACTTGGCATGGAATCCCTTACGC
20	ACTAGCATATTTCAGGGCACCGGC
21	GAACGGTCAATGAACCCGCTGTGA
22	GCGGCCTTGGTTCAATATGAATCG
23	GATCGTTAGAGGGACCTTGCCCGA
24	TGGACCTAGTCCGGCAGTGACGAA
25	ATAAACTACCCAGGACGGGCGGAA
26	CATCGGTTCGCGCCAATCCAGATA
27	GTCGGGCATAGAGCCGACCACCCT
28	CTTGGGTCATGATTCACCGTGCTA
29	TGCCTAACGTGCTAATCAGCAGCG
30	CGCATGTTGGAGCATATGCCCTGA
31	AGCCACTGCATCAGTGCTGTTCAA
32	GGTTGTTTTGAGGCGTCCCACACT
33	TCGACCAAGAGCAAGGGCGGACCA
34	GACATCGCTATTGCGCATGGATCA
35	GAAATACGAAGTCTGCGGGAGTCG
36	TGTCATGAATGATTGATCGCGCGA
37	ATATCGGGATTCGTTCCCGGTGAA
38	GCGAGCGTACCGAAGGGCCTAGAA
39	TTACCGGCAGCGGACTTCCGAATT
40	GTAATCGAGAGCTGCGCGCCGTCT
41	TCCCTGAGGTCGGAAGCTTCCGAC
42	CCTGTTAGCGTAGGCGAGTCGATC
43	TAGCGGACCGGCAGAATGAGTTCC
44	GGTACATGCACTACGCGCACTCGG
45	AATTCATCTCGGACTCCCGCGGTA
46	GCCAAATCTGGATTGGCAGGAATG
47	TGCATTTTCGGTTGAGGCACATCC
48	CCGCTCAATTCACCATGCTTCGCT
49	CTCGGAAAGGTGCAACTTTGGTGT
50	AATTCGACCAGCAGAACGTCCCAT
51	GCCAGAGTCTCAACCTCACGGGAT
52	CCAACAACTGGAACGGGAACCCGC
53	GAGAACTGATCGCTGAGGGGCATG
54	GGCACACTAGACTTGTGGCACCGA
55	CTTGGGCAAACGCTTCAGCCACAA
56	TCACATCCAAATATGGTCCGCGAA
57	GTCTGCCGGTGTGACCGCTTCATT
58	CATCGCAGAGCATAAACACCCTCA
59	GTTGGTATCTATGGCAGAGGCGGA
60	ACGAGGTGCCGCTGAGGTTCCATT
61	GGAATGAGTGGACCCAGGCACATT
62	TGTCAATATGCGTCCGTGTCGTCT
63	TGATGAGCCTCAGGGTACGAGGCA
64	CACCGCGGTGTTCCTACAGAATGA
65	TTGTTGCCAATGGTGTCCGCTCGG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
66	TTAACCTGCGTCTGCCCCTTTCCT
67	AGGCGCGTTCCTGCCTTAGTGACG
68	TAGGGCGATGGCACGAAGCTTCAA
69	TGCATAGAGCCAAAGTCGGCGATG
70	TTGAGAGGCAGGTGGCCACACGGA
71	TCCGCATTGTGAGAAAAAACGAGC
72	GGCGGTTTCCGTAGCTATAGGTGC
73	GGTGAAAATTTCGTAGCCACGGGC
74	CCGACGGAGGATGAAGACAATCAC
75	CCAGTTTGGCCCAATTCGCCAAAA
76	GGATCTATTAGGCCGTGCGCACAG
77	CGGATGTCACCGTTTGGACTTTCA
78	ATCGCAAATCCTGCTCGTCCCTAA
79	CAGGGCATGCAATAATCGAGGTTC
80	CATGCGTTGATATATGGGCCCAAG
81	CAGCTGCAGCTTGTGACCAACCAC
82	TTGTATGTCTGCCGACCGGCGACC
83	GATGGCGCCCGTTGATAGGTATGG
84	ATGAGAATCGCCGGCAATCTGCTA
85	ATTTGCACTGACCGCAGGCTCGTG
86	CAGGGAGAACGGTTAAGTTCCCGT
87	AGGCCGGCGATCGAGGAGTTTGGT
88	ACACGGTGGTCTCTGATAGCGACC
89	GTGCAACGCCGAGGACTTCCATCA
90	TCGGTGCCTGATAGCCATTCCGAT
91	TGAAATACCACACAGCCAATTGGC
92	GCATCGTGTACATGACTGCCGCGA
93	CAGTGTTCTAACGGCGCGCGTGAA
94	CGCTTGCAACGTTGCACCTACTCT
95	CGAAAAACTAGTGGGCTCGCCGCG
96	CTTTCAGGGGAACTGCCGGAGTCG
97	TTGTGGCCTTCTTGTAAAGGCACG
98	TCCACGAACGGCGACCCGTTGTCT
99	CGACCTTGCACGAAACCTAACGAG
100	GTGCAGCTTCACGAGCCAGCCTGA
101	CGCTTTCGTGCGAATAGACGATGA
102	TGCGCTTACAGGCTCCTAGTGGTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
103	CACGCGCTTAGTCGCGATCGCATA
104	CGGAGGGAGGGAGCTAGCCTTCGA
105	GCATCCGGCCTGTTGATGACGCCT
106	AGGCCAATCGATCTTATTGCCGAG
107	CCTTCCAATGATTGCATACGccCA
108	AACACTTGATCAGGCGGGTCGTCT
109	TGGAATCAAGGCCGTAAAGGACAG
110	GCTCCCGTAACCTGTCCACCAGTG
111	AGTGGTGAATGGCCGCTACCCTGA
112	TGTTGAAGCGAGCTAAAACGGCCA
113	CAGCGCTCCAGAATTGACAGCAAT
114	AAGGTGGTGCCATTCATTTGGCTA
115	CGTTAAACCGCAATCCGTTCGGCT
116	TGTCTTCCACCTCGAAGGTTTCCA
117	CACGAGATACCGGCGTAAGGGTGG
118	CTACGGCAAACGTGTGGAATGGGT
119	GTAGGGCGATGACGGGCGAACTAC
120	AATCGACCTCCGCACACATTCGCA
121	GAGTCAGCATGGCGGCGGAGATTC
122	AGATAAAGACGCTGGCAACACGGG
123	GGTACCTCAACGCGAACCACTTGT
124	AAGCGATGGCTACCCAAGAGCGAT
125	AGAGCTTATGCAGAACCAGGCGCC
126	ATCGGTCTCACGCAGGGTTGGATA
127	TAGGTTGCCCGCCAGAAGAAACAT
128	CGGTGCTGTTGCAAAAGCCTGTAG
129	TGATGAAAGTTTGCGGCAGGACAC
130	GTTGAGTGCAGGATGCAGCGATAG
131	AACATTGCGCGGTCCACCAGGGTT
132	GGGCAGTTAGAGAGGGCCAGAAGT
133	TCGAGCTGGTCCCCGTGAACGTGT
134	GTCTTGGGGGCCGCTTAGTGAAAA
135	ACTGTTGGCTTGCTCTCATGTCCA
136	AGGACCATTCGGAAGGCGAAGATA
137	CTTGGGAGGCATCCGCTATAAGGA
138	AATAAACGGAACGCACCGCTACAG
139	TTGTACGTGCGGTCCCcATAAGCA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
140	CGCACCAAACTGAGTTTCCCAGAC
141	ACCTGATCGTTCCCCTATTGGGAA
142	GGAACAGAGGCGAGGGGACTGAGC
143	CCCTGCCTTGGCGTGTCGGCTTAT
144	ACTCTGACACGCCAACTCCGGAAG
145	CTGACGGTTTTCATTCGGCGTGCC
146	TGCGGTGGTTCATTGGAGCTGGCC
147	GCATGGCCAACTAGTGACTCGCAA
148	AGGCCGTAAAGCGAATCTCACCTG
149	CGAATATTATGCCGAGAATCCGCG
150	ACAGACGAGCTCCCAACCACATGA
151	GGACGGTTTGTGCTGGATTGTCTG
152	AAAGGCTATTGAGTTGGTTGGGCG
153	GATGGCCTATTCGGAGATCGGGCC
154	GATCCAGTAGGCAGCTTCATCCCA
155	AATAACTCGCGCGGGTATGCTTCT
156	GGAGGAGGTTTGTCTCGGAAAGCA
157	CTTTGGTATGGCACATGCTGCCCG
158	AGAAAGGCTCGAGCAACGGGAACT
159	AATCTACCGCACTGGTCCGCAAGT
160	CGTGGCGGCCACAGTTTTTGGAGG
161	TTGCAGTTCAATCCATACGCACGT
162	GGCCCAAAGCCCCAGACCATTTTA
163	CGCCTGTCTTTGTCTCCGGACAAT
164	TGAGGCAACAGGGGCCAAAAACTA
165	AGCGGAAGTAGTCCTCGGCTCGTC
166	GGCCCCAAGGCTTAGAGATAGTGG
167	GCACGTGAAGTTTAACCGCGATTC
168	AGCGGCAGAAACGTTCCTTGACGG
169	TCGTCGAGCAGACGAGATTGCACG
170	TCTTTGCCGCGTAACTGACTGCTT
171	TTTATGTGCCAAGGGGTTAACCGA
172	TGTTACTGTGGTTCACGGCAGTCC
173	CGCGCCTCGCTAGACCTTTTATTG
174	ACAAATGCGTGAGAGCTCCCAACT
175	CGCGCAGATTATAGACCCGAATGT
176	CAAATAACGCCGCTGAATCGGCGT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
177	CCTTCGTGCATCGGTGATGATGTT
178	TGAACACGAGCAACACTCCAACGC
179	CAGCAGATCCTTCGTAGCGGTCGT
180	GGAACCTGGTGAGTTGTGCCTCAT
181	TCATAAGCGACAATCGCGGGCTTA
182	CCCAACGTCACTGAAGCTCACAGT
183	TGTCAGAGCCCGCGACTCAGACGG
184	TACACGAAGCCTCTCCGTGGTCCA
185	CTCAGAAGTCCTCGGCGAACTGGG
186	ATCCTTTTATCTACTCCGCGGCGA
187	AGGCGTGCAGCAACAGGATAAACC
188	ACTCTCGAGGGAGTCTCTGGCACA
189	TTGCCAGGTCCATCGAGACCTGTT
190	TCCACTATAACTGCGGGTCCGTGT
191	GCCCAGTCGGCTCTAACAAGTTCG
192	CGGAACGGATAATCGGCGTCAGGT
193	TAAAATAAGCGCCTGGCGGGAGGA
194	GCGCACTCGTGAAACCTTTCTCGC
195	AGTTTGCCAGGTACTGGCAAGTGC
196	ACAACGAGGGATGTCCAGCGGCAT
197	TTCGCAGCACCCGCTAGGTACAGT
198	TAACCCGATTTTTGCGACTCTGCC
199	CGTCGCATTGCAAGCGTAGGCTTG
200	GAGCTGACGTCACCATCAGAGGAA
201	GGAGGCTGGGGGTCGCGCTTAAGT
202	TTGTGGGPACCGCACTAGCTGGCT
203	CCCTCGCACTGTGTTCACCCTCTT
204	TCATTGACTCGAATCCGCACAACG
205	ACAGGGGTTGGCCTTCGTACGTAC
206	AGGCCGTGCAACATCACACAGGAT
207	GGGCCGTGGTCACGTAATATTGGC
208	GCGCGGACATGAAACGACAAGGCC
209	CTTATTGGGTGCCGGTGTCGGATT
210	GGGGCGGTTACCAAAAAATCCGAT
211	GCTAAAGCGTGCTCCGTAACTGCC
212	ATCTCATGCATCTCGGTTCGTCGT
213	ACGAAAAAAGTGTGCGGATCCCCT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
214	CCAAGTACACCGCACGCATGTTTA
215	ATCGTGCGTGGAGTGTCGCATCTA
216	TCCAGATACCGCCCCGPACTTTGA
217	TCTGCTGGCAGCACGTGAAGTGGC
218	TTGAAATTGCTCTGCCGTCAGTCA
219	AGTCAGGCGAGATGTTCAGGCAGC
220	ACAAGCCGACGTTAAGCCCGCCCA
221	CCCTAATGAGGCCAGTAACCTGCA
222	GTGAGACACACATCCCCTCCAATG
223	CGACGGATGCAGAGTTCAGTGGTC
224	CCCGCATGCCTGGCGGTATTACAA
225	TTAGCAAAGCGGCGCCGTTAGCAA
226	CCCGACACGGGTCAGCGTAATAAT
227	GCGACGGCCCTGAGGTATGTCGTC
228	CAAAAGTGTGTTCCCTTGCGCTTG
229	TCTCGAAGCACAGCCCGGTTATTG
230	ATGCTAACCGTTGGCCATGGAACT
231	CTTGCGGAGTGTTAGCCCAGCGGT
232	TGCTCCCTAGGCGCTCGGAGGAGT
233	CCAATGCCTTTGAGTAAGCGATGG
234	AGCAGATAACGTCCCAATGACGCC
235	TTGACCATTACGTGTTGCGCCCAT
236	TCGCGTATTTGCGGAATTCGTCTG
237	CTGCGTGTCAACAATGTCCCGCAG
238	TCTGGTGCCACGCAAGGTCCACAG
239	CTCCGGGAGGTCACTTAATTGCGG
240	TTTTCGTGATTGCCCGGAGGAGGC
241	TCGGGATGTAGCTGGGGCTACCGG
242	CGAGCCAACGCAAACACGTCCTTG
243	GCAAAGCCTTTGTGGGGCGGTAGT
244	ATTCGACCGGAAATGAGGTCTTCG
245	TTCGCTTGCTGAGTTGCTCTGTTC
246	CGCGTGAAGACCCCATTCCCGAGT
247	AACCGTATTCGCGGTCACTTGTGG
248	GGGGCCAACCGTTTCGAGGCGTAT
249	TTCGGCTGGCAGTCCAAACGGCTT
250	GGGTGTGGTTAGAATGCACGGTTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
251	GCGAGGACCGAACTAGACAAACGG
252	ACGCACGCGTGACCGAAGTTGCTG
253	TAAAAGGTCGCTTTGAAAGGGGGA
254	TGCGATCGCTAACTGCTGGGACAA
255	GGAGGTATAAGCGGAGCGGCCTCA
256	ATGCTGACATGTCGTGCACCTCGT
257	TGTGGTTAAAGCGTCCGTTCAACG
258	CGTTCACACCGGCGTAAGCTGCGT
259	CCTATCCCGGCGAGAACTTCTGTG
260	GTCTGCACTCACGCAGCGGAGGGA
261	GCACGAGTTGGTGCTCGGCAGATT
262	AACGTCGCACGACACACGTTCGTC
263	ATGCGCGCTTATCCTAGCATGGTC
264	TCACGTTTTCGTCTCGACATGAGG
265	TGTGCCTCATCCTTAGGATACGGC
266	AGGTGGTGTGGGTCAACCGCTTTA
267	CTGGATCGAAGGGACTGCAAGCTC
268	TAGATCAACTCGCGTACGCATGGA
269	GATCCTGCGGAGAAGAGAGTGCAG
270	TACGTGTGGAGATGCCCCGAACCG
271	GCGCTATGTCAATCGTGGGCGTAG
272	AGCGAGGTTTCTAGCGTCGACACC
273	CGATGAAGACAGGTTTGCTGTTGC
274	ACCCAGGTTTTGCCGTTGTGGAAT
275	CCCTGTTAACGGCTGCGTAGTCTC
276	AGGCCGATTTCACCCGCCAATTGC
277	GAGCCCTCACTCCTTGCCCTTTGA
278	GGGTGGACATCCGCCTCGCAGTCA
279	GATGGCTGAGAACCGTGCTACGAT
280	TCGACGTTAGGAGTGCTGCCAGAA
281	CGAATGGGTCTGGACCTTGCATAG
282	GTGCACCAGACATTCGAACTCGGA
283	AGAGGCCCCGTATATCCCATCCAT
284	AACGCCTGTTCAGAGCATCAGCGG
285	AAGGCTCAACACGCCTATGTGCGC
286	AGTCCGTGTTGCCAGATTGGCTCG
287	ATGTCCCATGTAAAGACGCGTGTG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
288	ATGGAGTCTGCTCACGCCCAAAGG
289	CGGCCTCCAACAAGGAGCACTAAC
290	CAGAGCCGTGGCAACATTGCGAGC
291	TCATTTGAATGAGGTGCGCACCGG
292	GACGTACCGGAAGCGCCGTATAAA
293	ATGCGAGCAATGGGATCCGGATTC
294	AGAGTGAGGCCTCCCTGACCAGTG
295	CGCACCGTAAGTAGATTTGCCCGC
296	AGGGTATCGGAGCCAGGGCTTACC
297	TGAACCTTTGAGCACGTCGTGCGC
298	TCCGCCTTTTTGGTTACCTCGAAG
299	GAACGCCAACGGCACTAACACATC
300	CCGACAGCAGCCAAGACGTCCCAG
301	TTGTACACCTGGGCCACGCACAGG
302	CATAAAAAAACCTGGGGCTCTGCG
303	TGCCAACTGTGCAGACCGGACTTA
304	GGCGAAAGAGCGAAACCGGCTCGT
305	GGGATGCGTATTTTAGCGAACACG
306	TGGGATTCAGCGACCAGTACGCGA
307	CCCGATATTCGCCCGGCCTATTCG
308	CGAGAAGATGCCTCACGCAACCAA
309	AACCTTCACCCGTGGATGACGCTA
310	GGCTAGACGATGGATACCCGTGCC
311	GCCTCTTCTCGACGATGCGATTTT
312	GCTTCCGGATGAACGGGATGGTTG
313	CCCTCCATGTTCTTCGAACGGTTT
314	TTGATGGGCGGCAATGCTCTTGCT
315	ATTGTGAGATGCGCCAAATTCCCC
316	TCAGCACAGCCAGACGGTCAACTT
317	ACTCCACTCCTCGGTGGCAAACTA
318	TCTGGGCATGCCTGGACGGAGACG
319	TCTCAACTCCGGTACGACGAAACA
320	TTGCGTGGTCAAAGGCGCAACGTG
321	AGACAGCGATCCGCGGCTCATGAT
322	CGCGTCTCTAACTGAGAGCAGCCA
323	AGGCGCACATGTACGGACATTCAG
324	GATGAGTGGCACGTCGGTGTGTAA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
325	TGATCCATATTGTCGGACGTTGCG
326	ACCTGCCGGGAGTTCATAGGCTAG
327	AGCATTGGCGTTTTTCCGCAACGA
328	GGTAATATTCAGCGCGACCGCTCA
329	ATAGCGTACGACGAGGTGACGCGC
330	GGGTGAGGGAAAGAGCACCTGCCT
331	TAGGTCACGATGCGTTTGACGCTA
332	ACTGCCCGTACCTCTGGTTCTGGC
333	CAAAAATCGGGTGAACATTGGCTG
334	CCTTTGGCCTGAAGTTGTCGTAGC
335	GTGCCCCACGAGCGTATCGTTGTA
336	AGGCGCTACGTGGGCCTGGAGCAA
337	GGGTGCTACCATTGCATTAGTCCG
338	ACCACGCGCGTACGTGTAACCGAG
339	CCATGATGCATTGGGTGCATTTAG
340	GGTCCGGCCCTACGAAACGTTCGA
341	CCGTGTGGCTGGAGATTCGTGTGA
342	GTTAGGGCGACGCATATTGGCACA
343	GGGTCAGTCAGGTGCGTTAGGATC
344	GCCGTGAAGTCGAATGCAGATCGA
345	GCCACCACCCAGTGCATTCAGGTA
346	GAGCTTAGTTTGCGGTCATCGGGC
347	TGTTTGCCGCCATTAGGGAGTAAC
348	GCTCCGCTGGATGTGCCGGTTTAG
349	CGGTAGCATGCGAGATCCCTGTTA
350	CTACGCTCTACCAGTTGCCTGCGA
351	GTGCCTCCTGCTGTATTTGCCAAG
352	TTGCGACTCGACTTGGACGAGTAG
353	TCTGGGAGCTGTTTACTCCAGCCA
354	TGCACGCGGAACTCCCTTTACCAT
355	TGGCAGCAAATGAATCGAAAGCAC
356	AACTGGTGACGCGGTACAGCGAAG
357	AGACGATTACGCTGGACGCCGTCG
358	ATGCCCTCCTTCATGGAAAGGGTT
359	ATTCTCGGAGCGTATGCGCCAGAA
360	ATAGCGGAGTTTGGGTACGCGAAC
361	ACCTACGCATACCGCTTGGCGAGG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
362	GATTACCTGAATGGCCAAGCGAGC
363	CCTGTTAGCATCACGGCGCTTAGG
364	CGGAATGATGCGCTCGACAACGCT
365	TGAGAGAGGCGTTGGTTAAGGCAA
366	AAGCAGGCGAAGGGATACTCCTCG
367	TCACGACAGACGGGCCGAGATTAC
368	AAGCAATTTGGCCTCGTTTTGTGA
369	GCTGGTTGCGGTAGGATCGCATAT
370	TTGTGAATCCGTTCTGTCCCCGAC
371	CTCCGATGACAATTGTGGAGAGCA
372	TGGGCTCCTCTGAGGCGAGATGGC
373	GGATAGAGTGAATCGACCGGCAAC
374	TGCACCGAACGTGCACGAGTAATT
375	GCCAGTATTCTCGGGTGTTGGACG
376	TCGCTACCTAAGACCGGGCCATAC
377	TGGCATTGACGAGCAGCAGTCAGT
378	CGCGTCCCAGCGCCCTTGGAGTAT
379	ATGAAGCCTACCGGGCGACTTCGT
380	CCAGACAGATGGCCTGGAACCATG
381	TGGCGTGGGACCATCTCXAAGCTA
382	CCGCATGGGAACACGTGTCAAGGT
383	GCCCACTCGTCAGCTGGACGTAAT
384	ATTACGGTCGTGATCCAGAAAGCG
385	TGCGAGGTGAGCACCTACGAGAGA
386	GGGCCGCATTCTTGATGTCCATTC
387	CCTCGGATGTGGGCTCTCGCCTAG
388	TAGGCATGTTGGCGTGAGCGCTAT
389	CGATACGAACGAGGATGTCCGCCT
390	TACGCCGGTTAGCACGGTGCGCTA
391	CATACGATGTCCGGGCCGTGTCGC
392	ATCCGCAGTTGTATGGCGCGTTAT
393	GGGTAAGGGACAAAGATGGGATGG
394	ATTGGAGTGTTTTGGTGAATCCGC
395	GAACCGAGCCAACGTATGGACACG
396	GCCGTCAAGCTTAAGGTTTTGGGC
397	ACCTGCTTTTGGGTGGGTGATATG
398	AATCGTGGGCGCAGCAAACGTATA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
399	GTCGCCGGATTGCTCAGTATAAGC
400	ACCCGTCGATGCTTCCTCCTCAGA
401	ATCCGGGTGGGCGATACAAGAGAT
402	TTCCGCATGAGTCAGCTTTGAAAA
403	GCAAAGTCCCACTGGCAAGCCGAT
404	CGACCTCGGCTTCATCGTACACAT
405	CTCATGAGCGCAGTTGTGCGTGAG
406	CAGATGAAGGATCCACGGCCGGAG
407	TCAAAGGCTCTTGGATACAGCCGT
408	TCCGCTAATTTCCAATCAGGGCTC
409	ACGCACGGCGCTTTTGCCTTAATG
410	TGACAACGTCACAAGGAGCAGGAC
411	CTTAGTTGGGGCGCGGTATCCAGA
412	GCTCTAATGCCGTGGAGTCGGAAC
413	CCGATTACAAATTGACTGACCGCA
414	AGACGTACGTGAGCCTCCCGTGTC
415	AATGGAGCGATACGATCCAACGCA
416	GGAGGCGCTGTACTGATAGGCGTA
417	TGTTTTTGAATTGACCACACGGGA
418	CATGTCTGGATGCGCTCAATGAAG
419	GCCCGCTAATCCGACACCCAGTTT
420	CCATTGACAGGAGAGCCATGAGCC
421	GAATCACCGAATCACCGACTCGTT
422	AACCAGCCGCAGTAGCTTACGTCG
423	TTTTCTGAGGGACACGCGGGCGTT
424	GGTGCTCCGTTTGATCGATCCTCC
425	CCGCTTAGGCCATACTCTGAGCCA
426	TAAGACATACCGACGCCCTTGCCT
427	GTTCCCGACGCCAGTCATTGAGAC
428	TAAAAGTTTCGCGGAGGTCGGGCT
429	CGGTCCAGACGAGCTGAGTTCGGC
430	CGGCGTAGCGGCTACGGACTTAAA
431	GCTTGGATGCCCATGCGGCAAGGT
432	AGCGGGATCCCAGAGTTTCGAAAA
433	GAGCTTGAGAGCGAGGTCATCCTC
434	GCATCGGCCGTTTTGACCATATTC
435	CATAGCGCTGCACGTTTCGACCGC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
436	ACCCGACAACCACCAATTCAAAAA
437	GCGAACACTCATAAGAGCGCCCTG
438	TTTTGGTGTGGCCGGTTGAAGCTC
439	CCGCCGAGTGTAGAGAGACTCCGA
440	GACATCGGGAGCCGGAAACATGAG
441	TCGTGTAGACTCGGCGACAGGCGT
442	ATGCGCATATACTGACTGCGCAGG
443	ACAAGCGAACCCGAGTTTTGATGA
444	GCATGAGACTCCGCGAAGACATGT
445	TCCTACATGTCGCGTCACGATCAC
446	GACCGATCGCGAAGTCGTACACAT
447	GTCGCCAGGACTGGGCCGATGTGA
448	ACCGATAAGACTTGCATCCGAACG
449	TCCATAACCAGTCCGAAGTGCCGG
450	ACGCGCCCTGCATCTCGTATTTAA
451	AGACCGCATCAATTGGCGCGTACC
452	AGAGGCTTGGCAAGTAGGGACCCT
453	GCAATGGACGCCAGACGATACCGG
454	GCTGGACTTAGTCGTGTTCGGCGG
455	GGGGCTCATGAACGAAAGGCCTTT
456	AGGCATCGTGCCGGATTGCTCCCT
457	TGCGCATGTCGACGTTGAACAAAG
458	ATTGCATTATGCGGTCCCTCAAAC
459	TTCGGGTCACATCCGATGCCATAC
460	ACCCATCGCCGGAAAGCGATGTTG
461	AAGCGCTGACTCGGCTAAGAATCA
462	ACTTCCAAGTCCTTGACCGTCCGA
463	TCTCAATATTCCCGTAGTCGCCCA
464	AACAGTTCCTCTTTTTCCTGGCGC
465	CGTCCTCCATGTTGTCACGAACAG
466	TGCGCAGACCTACCTGTCTTTGCT
467	ATGGACGGCTTCGCAGTCCTCCTT
468	TGAACGCTTTCTATGGGCCACGTA
469	TGAACCCTGCCGCGAGCGATAACC
470	GTTCTTGCGCGATGAATCAGGACC
471	AGGGTACGTGTCGCAGCTTCGCGT
472	ACCCTTGCTCCGCCATGTCTCTCA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
473	GGGACAAGGATTGAAGCTGGCGTC
474	TGTCGTTGCTCCCGAGTACCATTG
475	GTGGTTATCTGCGAGGGCTTTTGA
476	GTTGTCCGAGACGTTTGTGTCAGC
477	GCTGGTGAACACTCACGAACCGCT
478	GCAGACAGGGCAAATCGGTGCAAA
479	CCCATCACAACGAGTGGCGACTTT
480	GC1TCTACAGCTGGCGTGCTAGCG
481	GAATGTGTGCCGACCATTCTAGCC
482	CCAGCGGAAGTTAGAGCTCTGTGG
483	TTTTTACCGACCACTCCATGTCGG
484	GCGGCTATGTGATGACGGCCTAGC
485	AGTACACGGGCGTGTTAGCGCTCC
486	TCCTGTGTGGTGGCGCACTCCCAC
487	CCAACTAACCAATCGCGCGGATGA
488	AGTGAGTGACCAAGGCAGGAGCAA
489	CATCTTTCGCGGAGTTTATTGCGG
490	CTTCGTCCGGTTAGTGCGACAGCA
491	CTCACGAAAACGTGGGCCCGAAAT
492	CGCAGCAGCTGAACTCTAGCATTG
493	AGGAGACATACGCCCAAATGGTGC
494	ATTGAGAACTCGTGCGGGAGTTTG
495	CTCTTTGTAGGCCCAGGAGGAGCA
496	GCCGCAGGGTCGATAATTGGTCTA
497	AAACGCCGCCCTGAGACTATTGGG
498	CTGAGTTGCCTGGAACGTTGGACT
499	CGGATGGGTTGCAGAGTATGGGAT
500	CTGACCTTTGGGGGTTAGTGCGGT
501	GGAAATGAGAACCTTACCCCAGCG
502	AACGCATCGTCCGTCAACTCATCA
503	TGGAGAGAGACTTCGGCCATTGTT
504	ACGGAAGTCACGGCGTCGCTCGAA
505	TTGCGCTCATTGGATCTTGTCAGG
506	AGCGCGTTAAAGCACGGCAACATT
507	AGCCAGTAAACTGTGGGCGGCTGT
508	CGACTGATGTGCAACCAGCAGCTG
509	GGTTGCTCATACGACGAGCGAGTG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
510	GCGCAAATCCACGGAACCCGTACC
511	ACGCAGTTTATTCCCCTGGCTTCT
512	AGAACCTCCGCGCCTCCGTAGTAG
513	AAAGGAGCTTTCGCCCAACGTACC
514	AGTGATTGTGCCACTCCACAGCTC
515	GCGATCGTCGAGGGTTGAGCTGAA
516	GGGAGACAGCCATTATGGTCCTCG
517	GAGACGCTGTCACTCCGGCAGAAC
518	CCACCGGTCGCTTAAGATGCACTT
519	CGGCATAACGTCCAGTCCTGGGAC
520	AAGCGGAACGGGTTATACCGAGGT
521	TGCACACTAGGTCCGTCGCTTGAT
522	AGGGAACCGCGTTCAAACTCAGTT
523	GAATTACAACCACCCGCTCGTGTT
524	TTCAGTGCTCACGAAGCATGGATT
525	TTAGTTTGGCGTTGGGACTTCACC
526	AATGCGACCTCGACGAGCCTCATA
527	CCGAAACCGTTAACGTGGCGCACA
528	TAAAGTAACAAGGCGACCTCCCGC
529	TAATGATTTTAGTCGCGGGGTGGG
530	GGCTACTCTAAGTGCCCGCTCAGG
531	TGGCGGACGACTCAATATCTCACG
532	GGGCGTTAGGCGTAATAGACCGTC
533	GCCACCTTTAGACGGCGGCTCTAG
534	GAGATGTGTAAACGTGCAGGCACC
535	CAACCTCGTTGTCGAGTTTCTCGG
536	TAGCTCGTGGCCCTCCAAGCGTGT
537	GTGTCGGCGCTATTTGGCCTTACC
538	CCAGGGAAGCAACTGGTTGCCATT
539	TTCCGAAACTAAGCCAGAACCGCT
540	GCAAACCCGGTAACCCGAGAGTTC
541	GCAAATGGCGTCATGCACGAACGT
542	AGTACTTTCGCGCCCAGTTTAGGG
543	AAGATCTGCGAGGCATCCCGGCTT
544	GCAAGTGTATCGCACAGTGCGATT
545	CCGACAAGGCCTCAATTCATTCTG
546	GTCTCGTCTCAACTTTAAGGCGCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
547	ATCCAGAGATCCGTTTTGCAGCGT
548	GTCACCAGGAGGGAAGTTTCACCC
549	TATCTTACGCCCCACGGTCGAGCT
550	TTCCGTCAGGCGGATCAACGGAAT
551	ATGCCGGACACGCATTACACAGGC
552	TGGGCCGCTTGGCGCTTTCATAGA
553	CCTAGCGCGAGCTTTACTGACCAG
554	TTGGCCAGGAATATGGTCTCGAGA
555	GTCTGCGGCCGACTTGCTATGCAT
556	AACTTGCTCATTCTCAAGCCGACG
557	ACGTCAGCGATTGTGGCGAAATAT
558	ACGGCCTGCGTCAGCACATGCATC
559	ATACCTCCGCAGAACCATTCCGTT
560	AGTTCGCGGTCCCACGATTCACTT
561	TGCTCAATTTGTGCAGAAAACGCC
562	TTATCGCGAGAGACGACCGTGTCC
563	GACGCGACGTGAGTAGTGGAAGCG
564	ATGGTAGGGGCATTGGGCTTTCCT
565	CCAAATATAGCCGCGCGGAGACAT
566	GCAAACCCTGATTGAATCGTGCCC
567	TAGCGTCTTGCGTGAAACCATGGG
568	CCACCCCGACAGCGCTGGACTCTT
569	ACGAGCACTGAAGGCTGCTTTACG
570	CATATCAGCGTCGTCTAGCTCGCG
571	TGATCCCGGACCGGCTAGACTAAT
572	GGCCCCGACACTACAGGGTAATCA
573	GGCTCCAGGGCGAGATTATGAATG
574	CAAAATCCGATGGGCGGAAAATTA
575	CACAGGCGCATAGGGAGCAAGCTA
576	TAGCTATTGCCCCGATGGGCTACT
577	TGGTACGCGGTCCATAGCAAGTCG
578	GACGCTGTGGCTCGGAAACTGTTC
579	CCTGGGTTCGCCGCGTGGTAACTG
580	TTCCCGCGTAGCCCAACAGCTATA
581	TTCGCGGATTGCTGOCGCATAACA
582	AAAAATGGCACCGAAGTTGAGGCA
583	CATTCCGCGCGAGTTGAAATCCAG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
584	ACGCACGTTTTTTGGGACGGTTAA
585	TGTCCATGACGTCGTTTCTCTGGT
586	TCTCAGTCGGACTCGTATGCCAGA
587	CTCCAAACGCACACATCAAGCATC
588	TTCAACCAAGCGGGGTGTTCGTGA
589	GGTGTCGGAGGGTGGTGACCTCGA
590	AGCGCTTTTGGTCATGATTTGCAA
591	CCGAGGACTTACGTCTGCCCAGGA
592	GCCCAATCCAGTTCTTATGCGCCC
593	AAGCTTTGCGAAAGGTGTGTTGGC
594	CGGGTTAACCCACGCAAGTTATGA
595	TGATTAGCGCTCAATACACGCGTG
596	AAGGGCAGACCTTTGGTTCGACTG
597	GCGCCACAAGATTCACATGTCATT
598	GCCATGTTCAAGGGCCTTTCGAAG
599	CGCGGTGTTTTGTCTAGGTGCCGG
600	CAACATTGTGGTGGCACTCCATCC
601	CGATACGCGCCGGTTTGTTAAATC
602	GGCTATAAACGTGCGGACTGCTCC
603	TGGGTAAATCACTATTGCGCGGTT
604	GTCTTCATCGGCCCGCGCAAGCTA
605	GCGACACACCCTGTACTCTGATGC
606	GTAGCAGGGTCCGCAAGACCAAGC
607	TCGCCAACGCAGGGTAACTGCCAT
608	ACTCCGAAGCTTCGAGCGGCACGA
609	TCCCGCCCACTAGACTGACTCGTA
610	ACCTTCTGGGGTCGCTCACCAATA
611	ATCATCCCACGGCAGAGTGAAGAG
612	CGCTGGACTGGCCTATCCGAGTCG
613	CGGTCTCAGCAACACTGTCGCAAA
614	CGAACGTTCTCCGATGTAATGGCC
615	ATACCGTGCGACAAGCCCCTCTGA
616	AGCTCATTCCCGAGACGGAACACC
617	TTTCATGCGGCCGTTGCAAATCAT
618	ACTCGAACGGACGTTCAATTCCCA
619	CTGCATGGTGTGGGTGAGACTCCC
620	CCGCGAGTGTGGATGGCGTGTTGA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
621	AATGTGTCGGTCCTAAGCCGGGTG
622	TAAGACGAGCCTGCACAGCTTGCG
623	GGCGTGGGAGGATAAGACGATGTC
624	TGCTCCATGTTAGGAACGCACCAC
625	CGGTGTTGGTCGGACTGACGACTG
626	CCGCGCGTATCTATCAGATCTGGG
627	AAAGCATGCTCCACCTGGAGCGAG
628	ACTTGCATCGCTGGGTAGATCCGG
629	TGCTTACGCAGTGGATTGGTCAGA
630	ATGCAGATGAACAAATCGCCGAAT
631	GCAATTCTGGGCCATGTATTCGTC
632	AGGGTTCCTTACGCGTCGACATGG
633	GTGGAGCTAATCGCGAGCCTCAGA
634	TCGTAGTCTCACCGGCAATGATCC
635	TTATAGCAGTGCGCCAATGCTTCG
636	CGAACAGTGCTGTCCGTCGCTCAA
637	TCCGCGTGGACTGTTAGACGCTAT
638	CATTAGCCCGCTGTCGGTAACTGT
639	GGAAAGAAACTCAGACGCGCAATG
640	CGACTCGCTGGACAGGAGAATCGT
641	CATGATCCTCTGTTTCACCCCCGG
642	GGCGTAGCGCTCTAAAAGCTTCGG
643	AGTGATGCCATCAGGCCCGTATAC
644	TATGGAAAGGGCAACAGCGCTATC
645	CTGTGGTTGATGGAGGATCCACAC
646	ACTCGCTGGAATTTGCGCTGACAC
647	CAGGCCCGAACCACGCGGTTACAG
648	GGCGCAATGGGCGCATAAATACTA
649	GGTCAATTCGCGCTACATGCCCTA
650	TGAGGGCTGTTTGGTATTTGACCC
651	GATGGTGGACTGGAGCCCTTCCGC
652	CCGCGCATAGCGCAATAGGGGAGA
653	TCTTCTGGCTGTCCGGCACCCGAA
654	GCGTTCGCAATTCACGGGCCCTTA
655	TCGTTTCGGCCTTGGAGAGTATCG
656	AGGTGCAAGTGCAAGGCGAGAGGC
657	CGCCAGTTTCGATGGCTGACGTTT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
658	GCTTTACCGCCGATCCCAGATATC
659	GTGCTTGACGAAGAGGCGAAATGT
660	CAGTCCGTGCGCTTCATGTCCTCA
661	TACGCGTAAGAGCCTACCCTCGCG
662	GGCGAGTCTTGTGGGGACATGTGT
663	CCAAAGCGAAGCGAGCGTGTCTAT
664	GCCGTAGGTTGCTCTTCACCGAAC
665	AAATCCGCGATGTGCCGTGAGGCT
666	GGCTTCGCACCCGTACCAATTTAG
667	TGTAGAGTCCCACGTAGCCGGCAT
668	CACTAGTCTGGGGCAAGGTGCATT
669	TGTACTCGGCAGGCGCAATAGATT
670	AACGGGTATCGGAAGCGTAAAAGC
671	CGGACTGCCCGTTTGCAAGTTGAG
672	ATCGTTCAGCACTGGAGCCCGTAA
673	ATGCATCGAACTAGTCGTGACGGC
674	TTCCAGGCATTAAGGAGAGGGAGC
675	GTGCGACATCTACTCCACGATCCC
676	CTCATCGTCCTAACACGAGAGCCC
677	AATGGCACTTCGGCGGTGATGCAA
678	CCGTGGGAGGGAATCCAACCGAGG
679	AAATTCTCGTTGGTGACGGCTCAT
680	TTGCTCTTATCCTTGTCCTGGGCG
681	TTAAGGATCAGGCGGAGCTTGCAG
682	CGCGACTAAGGTGCTGCAACTCGA
683	GCTCGATTTCACGGCCCGTTGTTC
684	AGCAGAGTGCGTTGCAGAGGCTAA
685	TGGAGGTGAGGACGACGTGCACTA
686	AACCGTTTAGGGTACATTCGCGGT
687	TATGATCGCTCGGCTCACAGTTTG
688	GACTTTTTGCGGAAACGTCATGGT
689	TGTCGGTTATTCCACCTGCAAGGA
690	CTATGGTTTGCACTGCGCCGTCGA
691	AGCAGGGAAATTCAATCGTTCGCA
692	CCTAACCGAGCGCTTAGCATTTCC
693	CCCGACCCTAACTCGCATTGAATA
694	TTGCTTAATGGTGACGCCACGGAT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
695	GATGCTCGCCGTGTTTAGTTCACG
696	TCGGATGACGAGTTTCCATGACGG
697	ATGCGGTCTACTTTCTCGATCGGG
698	TTGCGAGGCTAAGCACACGGTAAA
699	AACTTAATTACCGCCTCTGGCGCC
700	GTGACCGCGAACTTGTTCCGACAG
701	TGCGGATTACCGATTCGCTCTTAA
702	TGATAGGGGGCCACGTTGATCAGA
703	TCGCTCCGTAGCGATTCATCGTAG
704	TGTCAGCTGGTAGCCTCCGTTTGA
705	AGCGTCGCATGACGCTTACGGCAC
706	TCACTCAGCGCTGTGACTGCCTGA
707	GTTTGCGCTATAGTGGGGGACCGT
708	GTCGCATTCTGCACTGGCTTCGCC
709	TGATTAGGTGCGGTCCCGTAGTCC
710	AAGGGACCTTGGGTGACGGCGAGA
711	TCAAATGGCCACCGCGTGTCATTC
712	CTCCGACGACCAATAAATAGCCGC
713	GGCTATTCCCGTAGAGAGCGTCCA
714	TGGATAACCTCTCGGTCCATCCAC
715	GACCGCTGTACGGGAGTGTGCCTT
716	GCCACAGAGTTTTAGCAGGGACCC
717	CCCACGCTTTCCGACCACTGACCT
718	CATTGACACAATGCGGGGACTGAT
719	AGCCACTCGACAGGGTTCCAAAGC
720	CAGGATGAGCAAAGCGACTCTCCA
721	CAAGGTATGGTCTGGGGCCTAAGC
722	GGTGTTCGGCCTAAACTCTTTCGG
723	TTTAGTCGGACCCTGTGGCAATTC
724	CACACGTTTCCGACCAGCCTGAAC
725	CTGGACGAACTGGCTTCCTCGTAC
726	TTCACAATCCGCCGAAAACTGACC
727	AACAGGATATCCGCGATCACGACA
728	TACGTCGGATCCATTGCGCCGAGT
729	CATGGATCTCTCGGTTTGATCGCC
730	AGCCAGGCGCGTATATACGCTCGG
731	ATTTGGCACGTGTCGTGCCATGTT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
732	CCGCGTTGCACCACTTTGAGGTGC
733	TTGGACGTGACAAGCATGGCGCTC
734	CTGAATCGCGCAAGTAAATGGGGG
735	GATAAGGTCCACCAGATTGCGCGC
736	CTAACAATTGCCAACCGGGACGGC
737	GGTAACCTGGGTGCTTGCAGGTTA
738	ATCGGAGCCACCATTCGCATTGGG
739	GTGAACTGGCTTGCCCCAGGATTA
740	AGGCGATAGCATGGTCCCATATGA
741	AACGGTATCGTGGCTAATGCACGA
742	AGTAGTGGTCCTCCAGATCGGCAA
743	CCGTTGAATTGGACGGGAGGTTAG
744	GCATAAGTGCGGCATCGCGAAGGG
745	CGACAAGATGCAGCTGCTACATGC
746	TCGCAGTGATTCCCGACCGATAAG
747	CAAGGCGAGTCCACTCGAGGGGAC
748	GCAACTTGCACGGCATAAGTGGCC
749	TCCGAGCTTGACGTTCGCGACGTC
750	AGCGCTGGGCTGTGCTGCCATCTC
751	TTCATGTCGCTGAGTAACCCTCGC
752	CGAACCGCTAATGCCCATTGTCAG
753	CACGGAAGGTGGGACAAATCGCCG
754	CACAGATGGAGACAAACGCGCCTT
755	TTTTCGCAACTCGCTCCATAACCC
756	ACGTTACGTTTCCGGCGCCTCTAA
757	TATCGGATTGCGTGGGTTTCAATC
758	CTTCCACAATTGTCTGCGACGCAC
759	TGCACAAAGGTATGGCTGTCCGGC
760	ACCGTGGCCGGGCCATAAGCTACG
761	TCCGATGCCAGTCCCATCTTAAGA
762	CTGAAACCGTGCGAATCGAGGTGA
763	CGGTGTTCCGCGTGTCGAAAAAAT
764	TCTAGCAGGCCTTTTGAATCGCCA
765	GAGTCACCTCTGAGACGGACGCCA
766	TCTTCTGTCATCCTGCAGCAGCAT
767	GCGGATGAAACCTGAAAGGGGCCT
768	GGGGCCCCAAACTGGTATCAAGCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
769	GCATTGGCTTCGGATTCTCCTACA
770	AGGCGGCCCAACTGTGAGGTCTTG
771	ACACCATGTGCTCCGCGCTGCAGT
772	ACGATGAACATGAATCGGGAGTCG
773	CTGCATCCCTGTAGCAGCGCTCCG
774	GTGCCGTATTTCGACCTGTGCGTT
775	GCAGTGCGCACTTCAGTTCAAAAG
776	GCGATTTTAAGCGATGCCTTGACG
777	TAGGTGACCTAGGCTTGCTTGCGG
778	CTGGATACCTTGCCTGTGCGGCGC
779	CCCCTTACGGCTCGTCGTCTATGC
780	GCGCTTGCCCGATGCGATGCATTA
781	TTTCTGTAAGCGGCCTGGGGTTCA
782	GGCTGAGGTGAGCGGTAAGGATGA
783	TCTTGGCCTCCCCGATCTAATTTG
784	GGAGGTAACGCCGTGTACGTAGGA
785	GTAATCCATTTGTGGCTGCGTCAA
786	CAAACCCATTCCAGCAGACGCCTG
787	TAGGAGGAATTTGGCATGCGGGCG
788	ATAGGTAGGATGTGCCCGGCGTTG
789	GCAAGTGCTTAGCTCGTCAGCCTC
790	CTGGCTGTGTCGCATCTCGTTAAC
791	CTAACGTCGTCTCGCGCAATCACT
792	TTTTCATAAACGTTGTCCCCGAGC
793	AGCAGGAGGACGAACCTCCGCTCC
794	TTCAAGCACCATCGTGCAATCCAA
795	AGCGTCGCCAGTGATCGCTAGTGG
796	TACATTCCCTGCCTCCGTGGGCTT
797	CGCTTCGCGTATTCAGTAGCGGTT
798	TCGGACGCGTCGACACTCATTATA
799	TCTGAGCAGGCCAGCGCTCCAGCT
800	TTGAATTGCCAAGCCCTGAAAGCC
801	AGTTTTCGCCTTGATGCGTCGGTG
802	GTTTCATAGGCCACGCGTGCTAAA
803	GGAGCGAAGACTTCGTCTGCCCAA
804	ATTGGCCGAGGGTGAATGCAGCCT
805	TGATCCATCCGAATGCTTTTCCAT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
806	GCACACAGTTGTCTTGGCCCATGA
807	CTGGCGGGCAGTGGAAAAAACAAC
808	ATCTCCATGCGTAAGACTGCTCCG
809	TCTCCTCTCGTCGCAGTTCGTGGA
810	TAGCGTATTCACTCTTGCCGAGCA
811	CAATCAAAAGCCACGGCGCGATGG
812	AGCGTCACGGAATTCAGCAGATCT
813	GACTCCCTGTTAATGCGCCCAAGG
814	TAGGCACTGCCGGTTCAGATTCAA
815	AACAGGGTGATAACGGTGGCCAAT
816	CGTGCGTACCATGTGTAAGTGCGT
817	GACCAATTCTACTTCGGCAGCCCA
818	ATCGGACCGATTTGCTTTTGGCTG
819	TCCGCCGAAGCACACGCTTATTCG
820	AACGGTACGCATTGTGAGCAGTGT
821	TGGCGACTACTGTTCCCCTGAATC
822	CAGAGGGGACAGCCGTATGCCTTA
823	CGGTGGTTTTATCGGAATCTGCGA
824	TTGGCCTCCGACCTCACGACATAT
825	CGTTTCGCTAGCATCTGGCGCCGA
826	ACTAAGCGGTGGAGCCGGTGGATG
827	ATATTGGCTGCGTTTACGGGCCGC
828	CCGCTATGGTGGCAATCCCGATAC
829	GTTGCATGTGGCTCAGGCGGCATA
830	ATTCTGGGGAGTGACCCAGGGCTT
831	CTCTCCAAGGAGACGAGCCAATGT
832	GAAAGGACGGGATTTGGGGGCTAA
833	TATGTAGTACCTTGGCTCGCGCCA
834	TCCCTTTCGATGAGCGGCTGTACT
835	TAGATCGGGCAGAGCCCGTATCTT
836	GGAATGCTTTAGGCTGCCGAGCTG
837	ATGGTAGCAACATTCAACGCCAGG
838	CTATGAAACGTGTGGCCCAGCAAC
839	ATGTTGCTAGTGCCTTTCGGGCCT
840	CCAATGTGCGCAGACTCAGTCATT
841	GATAGTGCTCGCAAACGGGCCTTC
842	GCACCCTGTTGCCTCATTGAGCGT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
843	GGCGTGAATAGAGTGACCAGGCGG
844	ACGTGCCAGCTGCGGGCACTTTAT
845	AGTGGAATAGTCGCGTCGTGCCGC
846	ACTCGCCTATTACCGCTGGATTGG
847	GAGACCGGATTGAGATGATCCCGT
848	AAAATGGCAGGCGGCAAGCAATTG
849	CTGGCAGTTTACCACCGAACCAGT
850	TTACATTGCCGATTTCGCATGTGA
851	TAAAACTGAAGGGTCGCCTCAGCA
852	GGCTTCGCATGCCTTTGCAACATT
853	AAGACCGAAGGTCTCTCTGAGGGC
854	GCCTATGGCTCCAGCTCAGCAGTA
855	CGTATCATAGCGTTCGGTGGACAA
856	CATGCGCTCGCACTCTGCCTGTCT
857	TGGGCAATTCGGAAACGTCGGTCT
858	TTGCGGAGATGCGACGGTACATTG
859	ACTTTCGCACGTCGATCTGGACTG
860	CTAACTGCCGCGGCAAACTGATTA
861	GGCCGCGGATTTTATTCCTTGGAT
862	GAATTTGGAACGGTGTTCCGATGA
863	GTCCATCCATCTACGGCATCAGGA
864	TAAACGACCTGGCACATGTGCGTA
865	CACCATCCAAGAGCCAATCCTAGG
866	ACTCATATACGATCAGTCCGCCGC
867	GTGCCAACCGACGATCAACCGAAC
868	TGGGGTTCGTACAGGTCGGTTCAT
869	AACAGTAGAGGCGAGGCCTGCGGG
870	TGCATCGAATCCGAGATGGATCTT
871	GCGTCACGTTATGTCCGCTCTGTC
872	GGGACATGCGTAGCGCAATATCAC
873	CACACGTCACACCATCCAAAGTGG
874	ATGCTCAGGTGCTAAATACGGCCA
875	AAAAATGTTTAGCGCGCTGACTGG
876	ATAGTCCGTTTCCGTTCCCAACGA
877	TCGATCTTCTGGGTTGCAGACCAG
878	GTCGGCGCAGCCGATCCTCATGTC
879	GTTGCGGGGTGTCGAAAAGGATCT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
880	ATCTCTTCCTCGGGTGGATGCCAG
881	TGATGTGCGTTTCAGCTTTTCGCG
882	GTTAAGGGGTGAGAACATCCGGCC
883	AAGTCGTCTCCCTGCGTCTCGTCC
884	CCGACCTAATAAGGCGCAACAATG
885	CATCATTGGCACCGTACCAATGCC
886	TGGAGAAAGGGAAGTGCAGCAACG
887	TGGTACTCCTTGTCATGCCTGCCA
888	GGCACAGGTTCTCTTGCAGCGCGG
889	GAATCTGGGCATTGCTACGAGACC
890	CGAAATGGGAGCGTCCACTACCAC
891	ACATATGAGCTCGCGTGCTTGCAT
892	TCGAGCACGGTCACTGATAAAGCC
893	GAGGGTCCCTGCTCAGAGTTGGTT
894	AAATGCGATCGCCCCTTATGGAAT
895	CTACCCGAATGGATTGCGGATGGC
896	AGGGACTGGCAGGTCTCTGCGCGT
897	TAACGATCCATTCCACGAATGCAG
898	GGCCGCACGTACGATTACGCCTTG
899	TGGGGAATGCATCAGTTGTTGGCT
900	TATCTGGGAGTAGCAGGCAGGGCC
901	CCGAAGGTTTCACGCTCAGGTCGC
902	GAACCCAGCTGGGACATCCTTCAG
903	TGCATGCGAGCAAATAACCCGGAC
904	AATTGTCCGCCAAACGCTTTTCAG
905	GTCGGCTTCGAGCGATCGAGTGTG
906	TCGCGTGCTCTACGTAGCCCATGA
907	GGCTTCCGCGATAACGTAATTCGC
908	TGTAGCCGACTAGGGCCGAAGCCC
909	AAGCGAACGCCCTGGCTGAATATT
910	TGTCACGCGACGTGCTGCAGATTT
911	CCGTGTCCGTGTTGTCGACAGGCG
912	CCCCACACGTTGCGCCTATATGTG
913	GGCGGGCACAACTCAACACAGATG
914	CGACTGCGGGATCACCGGTGATTA
915	TCGGGACATGACCGGTACGGAGTC
916	TACCTCGAGTGGCCGTTGATCGGG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
917	TAATTCATGGGGCTAGCCGAACCA
918	ACACTCTAAGCCGATTCCGTTCGA
919	GTGGGCGTGAGTGACACGCACAAA
920	ACGACTCCTCGGGCAAAGTACGTA
921	TGTGGTCATGGCGCTACTGTTTTC
922	CTTTCGCTAGCCAGAGCGGGTTCC
923	ACAGGGCGTGTTAGCGTGTGACAA
924	GGTACTTCCGGCGTATCGGGCCAC
925	GTGGGTTTTGTTCACCCTTCTGGG
926	ACGCAATTCCGCATTACTTACCCG
927	CGCCTCGACTGCGGTCAAGCACAA
928	GTGAAATGGATCCAGAGAGGGCCA
929	TATAAACGCTGCAGGGCTCCGTTA
930	GTTATTCAGGCGGCTTGTAACGGG
931	GGGTTCTAGCGTGCGCGTTCAGTT
932	TTGGGCTCGAGCGGTACACCACTA
933	CCGTCTTCAGGACAACGGTATGCG
934	GGACCCTTTGACAGATTGCGGCAC
935	TAAATTTTATCGCCAGGCGGCGCT
936	GCCGAACGCAAGATCGCTTGAACT
937	TAGGCCATTGGTGCCCTAAGACGG
938	CAAACCACAGCTTACAGGCTGCGT
939	TAAACGGAGACTGGCACGGTAGCA
940	TAGCGCGCATCACACTTGGAATCG
941	TGCTGACACAAACGAGCCGTTTCG
942	CGCTTAACGGCATTGACTGTCCAC
943	TTCCACGGCCGTGTATTACGGATA
944	TTTATGCCGTTGCCGAGGAAGACT
945	AGTGCCGAGATAGGGGACTGGGCG
946	CTAGTCTCCACGCCCTCGGGACGA
947	CCGCCATTCGGAAGATGGATGATG
948	TGACGGTGAAAGTCGATTGCGAAG
949	ATATGCGTCACCACCCGGTTCCGA
950	CCATCAGTGAAGGGGTTGCTGCCA
951	CATATGTGCTTGGCTTGCGATGAC
952	TCTGCTTTGGAAGCCTGAACTGCT
953	CGATTTGGTCAAGAAGGCGGAAAT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
954	ATCAGAGGCCTTCCCGCCTCGTTA
955	ATTGTTGTCGTTGCCACATCGCAG
956	TGAAATGTGTCTGGACGCGAGTCT
957	GCGGGCGATGCTCCTTAAAGGGTA
958	CCGCAATCTCCATGCGTCGACCGT
959	TGCCGCGTAATCACCTGGAACTTG
960	TTCCAGTAGCCAGCGGTAGTGTGA
961	CTGAATTCCGCCTATTGTTCGGCA
962	GCTTGAACCTCGAGGCGATGTTCT
963	CAAGCGTGGAAGTACGACCCGCCA
964	GTGTGCACTGGATCCGAGCCCTAG
965	TCCCTGGGCTAGCATTGCGAGGTT
966	AGAACCAAAGACGCTTGTTTGCCG
967	CGTCACATGCAAACGTTCCCTCCC
968	TGACCGCATGTGTATTGAGTCGCT
969	GCGGGCCCAATGAGTATCCGTCAT
970	TAGTGACTGTGAACGCCCCTGGTT
971	GGCACCGTCTGCCGCGCGTATATC
972	TCGATGCAGTCTTTTTCCCGTCAA
973	ACCCCGTGGGGTTTCGCCATTTTT
974	CTACACGCGCAGTTGTGACTTGTG
975	CGCAGCGACCTCATCTCTGGAGCC
976	CGACCCAGCACTCCTAAAATCGGT
977	ACGCGCCGCTCATCACTACAATCT
978	CGCAACTTCCTGTGGCAAAGCCAG
979	TCGTTGGGCACATAAGGCAACTGA
980	CCGCTTGTAATTGCCATTCTCCGT
981	GTAACCAGGGAGTCCTGGGCTGTG
982	AGCGCAAGATCTGGGGGCAGTCAC
983	GCGTACATCTGCTCATCAGCATGG
984	CCTCTGTGGCAGGAAAGAAACCGT
985	CCTATGCAATGGACCTGCATCGGA
986	CTCGGTGGATGGCGAATAAGGATA
987	CCTCACTCGTGATGGCGTGACGCA
988	TACGCTCACAGAACGCCATACGCC
989	CCGGAGAAGTTACGCGGATCGGAC
990	GCGCCCTCACTGCATTTTTGGTAT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
991	ACTTTCAGCACGCGAACAGCGCAA
992	CTAAACGCCCTTGATGCATGAGCA
993	GCTTGCCTTTTACGATCGTCGCTA
994	CAGACATCGTACGCACTCGGCATC
995	TAGCCGCGCGGCTCCTATGCTCTT
996	GATGCCCTTTTGGTCCCCATGCCA
997	TGAGCTGCCTTGCCACGATGCCTC
998	CCGCCGTATACGTGCCATAGTTTG
999	TAGTGCTCTCCGCGCTCATCCAAC
1000	CCCTAGATAAGTTGGGGTGGGACG
1001	TGAAGGGCCACCTGATATGGTTTC
1002	GCCGCCTCCGACTGGTTAACCCGA
1003	CGCACGGCTACTAACAGCGGATCA
1004	CCGGACCAATTCCAACGAGCATCG
1005	CATTGAGGTCCACCGTTCACATCC
1006	AGGACGCAGCATGTCCCAGCCGAG
1007	TAATCGCGGGCCATACTACCAACG
1008	CGCAAATTTCTCCGGTCGGCAAGC
1009	GTGGCTCGACTAATGCCTTGCGTG
1010	TGTGGGCGTGTTCCGGCTCACTGT
1011	GTTCTTCCTTTTCTGCGGTGGGAA
1012	ACCTCGAGTCAGATTGTGCGCCTT
1013	CAAGTGGACAGACGGTTTGTTCCG
1014	TCCAGTTGAGTCGCGCCGACGAGG
1015	CGCAACAGGTCAGCCCTTATTTGC
1016	GCCGTGACTCCTGCAATGTCGGTA
1017	ATCAGCGCAAGCTGGTCTGAAACA
1018	CCCTGGCCAGAACGAGAGGCCATG
1019	ACGATCAAGGACTCGTCAGGGTTG
1020	TTCATGGCACCAAGACCACCGTTA
1021	ACAGCAAGGAGATGGATTGCGACG
1022	CGTAAATATCTGCGGCGGTGTGAA
1023	GGAAACACGTGTTCGTCTGTTGGC
1024	CGATGTTAGGATTCGGATAGGCCA
1025	ATCGGACAAGGACAAGTGGATGGT
1026	GCCCGGAGGACAAAGTTCGAGTTA
1027	AAATCCGACAAATGGGCACATGGA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1028	CAGTTAGGGGATGCGGATGAGTGA
1029	CGGCAGGTGGAGATTCCGACATTG
1030	TAGGGCAGCCAGGTTCACTCATCT
1031	GCACCGTATTAGCAGTAGGCACGC
1032	ACGCATTACAGGTGTGCGAAGGGA
1033	CGTGACTGCACGTGTTCCACAGGG
1034	GCTGAACTACCGCCTAAAATCGCG
1035	AGCACGCCAGGGAGGATCGAGTTA
1036	ATGAGGGCAAGGAATGGGTCATGC
1037	GGGTCTCTCGTAATCAAAGGCCGA
1038	TATCTTGCGCAACGCCTCCATTTA
1039	GGTTACACCTACGGAATCCAGCGG
1040	ACACCGAGTTGGTCCGGTCAATAG
1041	TCCCAGATTAAACGCTAGCCACCG
1042	TTGGTGAAACTGGCCCGTCGGAAG
1043	CCAGGGGAGTTGACAATGAGGCTG
1044	TCTGCGTTATTGGACCGTTTGTCG
1045	TATGGGATGCTAAACCGGCGTACA
1046	CACAGACGTCTGTCGGGCTTGTGT
1047	AGAATGCCGTTCGCCTACTCCCGT
1048	CGACGGATAATGCAGGCCTCATGA
1049	ACCCTCTAAAGCAATAGGTCGGCG
1050	CACTCACGGCAGAAGCCTGCTTGT
1051	ATCAGCCCACATATTCTCGGCCGT
1052	CAAATCTGGGGTCGTCCTAAACGC
1053	TGTCGCCCATGGCAGGTTAAATAC
1054	GGGGGCCCATCAATTCATTATCGA
1055	GTCGAGCAGCTTTAGTATCGCGGG
1056	CCGCTAAGCACCGAAGGCTCACAA
1057	TAGAATTAGCGAACGGTGATCCCG
1058	CACATGACATTTGGCAAAGGTCCA
1059	TCAACGCACTGGCGATGACTAGAT
1060	CGGGAAATGTCTTTAGCCGTCGAA
1061	ATCAGAGCAAATCTGCAGCGGGGA
1062	GGCCTGTTTCTGTCCAACTGGGCT
1063	ATTTCACCTCGCTGATCGCTTCCG
1064	AGTGACGCCGAGTCGCGAGGGTTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1065	AGTTGTCTCATCCTGTCCGGGACC
1066	CTTCTTTGTGCACACTTGCCAGGG
1067	CACCTCATCGGAGCATAGCAACCC
1068	ATGCGATCCATGACAAGGGTTGCT
1069	CCCGTGGAGATGATGTGCGGCTTA
1070	CCCAATAGACGCCACAGCCAGTGA
1071	AACGACCACGACCCTCGCCGAGTA
1072	GGTGCTTTGTCTGAGGCGAGTGAA
1073	CTGTCGGCGCTGCTCTCCGAATTT
1074	CTCGCCGGAGTGTTGTAAGCATTG
1075	AGCAATCATGAGAGGTGGCCGGTG
1076	ATTTGCCACCGGCGACAAAAAGAT
1077	CCGCCCGTGTTGGCATGTCTTTTG
1078	ATCGGAAGTGCTGACTGACACACG
1079	CCTCAGACCCTATCTGGGTTGACG
1080	CTGTGTGGTCTGGTCCGGCTGTTC
1081	GTCCCCATTATCGGTGAGTGCAAC
1082	ACAGGCACGTAAGTGCTCAATCGG
1083	AGCAAGATAGCGGGAGTGCCCCTA
1084	GGTTTACGCCATGACATCCCGTCA
1085	GTGCAGGCCTTTGTGTGTGAATCG
1086	CTTCGAGGGTAGGGCTTCGAAACG
1087	AGTCGACACTTGGGTTTACCACGG
1088	ACATAAATCTCGCCCGCTGCACTC
1089	GTTTGGTTTTCCACGGAGGTTTGA
1090	GCAGGAACCAGATTAGTGTCCCGG
1091	TTTGCTAGAGCGCGGAGCTAAAGC
1092	CTATGTGGCATCGCTGACATGCTC
1093	CCTAAGTCGGTTTGCAGCTGCTCT
1094	GCGTTCGTCCACAGGAACGGAAGG
1095	TAACCCGCGCCCGAGAAATTGTCT
1096	TATGGTGCTCAGAGCTGTTGCCAA
1097	TCATCGACCCACTAACGTCAGGGC
1098	TGCTCAAGCTACGCGTCACTTCCC
1099	AGCGGGAAGGTCTGAGGAGGGAAA
1100	CCGATGTAGCACCACCGCAGTGGC
1101	AAGTTCTGGGAATCACACGGCGCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1102	CACCAGCCTTACGTGCGGCGTTAA
1103	CGTTTCGCCTCCTCTTCCGAATGC
1104	GAGGAGGCCAATAGAGCAGCGCGC
1105	AGTAATCTTGCGGCACACAAGCGG
1106	TGAGGACAAACCGCGCGTAGGATA
1107	TCGTAGAGACGCAGTGCCCATCTC
1108	CGAAGCTACACCCCGAGTGCGGTG
1109	ATGATGTGATCTTCCCATGGCTGG
1110	TGTACACGTATCGCGTTCGCCTAG
1111	GGTGTGCTTTTACGCATGTACGCA
1112	AGGCGGGATACGTGGATGCTAGCC
1113	AAATTAGGCACAGCCCTCCCACAG
1114	ATAAGTTTGGTGAGCCATTCGCGA
1115	CCTATTTCGGCGGACCTCGATGCC
1116	TTACCGGAATATGCACTTGGCCGC
1117	CCTCTCGGACGGTCCCTTTGATCG
1118	CAAGCGAATGCTGTATTACGGCCT
1119	GCATTTCCCATGCCAGAACGTTGA
1120	GTTTTGGCTAACCGTCCTGCCTTG
1121	AGGTTTTGTCCGGGCGAATGATGT
1122	ATGTCCACGAGTGCGTCCGATATC
1123	AGACGCGTACGAGGGTTCTGCGCC
1124	AATACCGTTCCCATCTGTGCGAGG
1125	ACACAAGGTGCCTCATCGAATGGT
1126	GCCGGCAAAATCCTACAAAATCCA
1127	CTTATCCCATGTGCCGGTCTGACT
1128	GCGGCCATAATGCATAGCACGGAA
1129	TACGGTGCATCGCAGTATGGGTAA
1130	CACCAGATGTCGAGGATCATCGCC
1131	GCTCCTACGCCCAAAGAGGTATGG
1132	AGAATATGGGCAGCAGCAGCACTC
1133	CTGCAGTCGCACGCAGTAGACCCG
1134	ATGTCCCTGACCGGAATCTTTCCA
1135	TTCGCCACGAGGCATTAGTCCGAC
1136	ACGTCGTTCCCGAGAATACGGTCT
1137	ATCCGCTGGCGCTTTGACGAAGAA
1138	TGPACCAAATTCTTACCGCGTGGA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1139	CACGCGTAGGCTGGTGTGTCATTC
1140	TCGATCCCGCGATCTGGCCTATTG
1141	GGAACACTCAACCACCGTGGATCT
1142	TCACACACCAACTGGCCACAGATG
1143	TGTGCTTAGGACACCAGGCAACCC
1144	GACATTTAACCCGACCGATTGTGC
1145	GGCACCGAGCCAGTAGGCCTCTGA
1146	CTCAAGCGTGCATGTTGGTAACCA
1147	AGGAAGGCCACCATCCAATATTCG
1148	TTGGAGCCCTGACTGAACCAAATC
1149	TACGAACGCCAAGGTTATGCCAAT
1150	CGCACCAGAGTTATGCAGGCTCAA
1151	CCAGCTTGGACGAGGAAGGATGTG
1152	GTCACGCCTTTCAAATGACCCACA
1153	TGCTAGACCCAGCCCGAGTCTCGG
1154	TATTGTGGCACTTGGGTCCAGTGC
1155	CACGTGTGAGACCGGAAGTGCATC
1156	AACCTCCAGCAAAACGTCGAGGTT
1157	GGCAGCCTGATGCTACAGCACCGT
1158	CGGTCCGTCCATCCTTCAGAGTTA
1159	CTATTCGCGGACCCTACGCAGTTT
1160	ACCTGTGCAGTCAGCACGAGTGCG
1161	GAGAACCACAGGTGGTCCACCCTA
1162	CCTCGCTAGAGAAATCCACGGGAT
1163	TAACATCGGTGCAAACCGTGGCGC
1164	ACCCAGAAGACATGGCATTCGCCT
1165	AAAAGCGCTGCTCTAACACCGCCG
1166	CAAGTCTGTCCATTTCCCAACGGT
1167	CCGACACATGGTGGGCTTTTTAAG
1168	ACAGACCAGCTTTTTGCGCAGATT
1169	CGGCGATCCATTTCACTTCAAAGT
1170	GACGTTATCATGACACAGGTCGCG
1171	GGCAGAGTTGGATCGGATCCTCAA
1172	TTGCTGGCAAACAGCTCCTGAAGA
1173	CCTCAATGCCACCGAATTCGGTAT
1174	GGAGTTAGCGTGATTAGTCGCCCA
1175	GAACTCGACGTGTCACGGAAGGGT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1176	CACAAGCGACATTTCTGGTGCACG
1177	CCAGAATGCGTGAATTCGCGTCCT
1178	CAAGGGAGCCCTGCGAATTAGAGT
1179	ATTCTTGCTTCGGACGACTAGCCG
1180	TGCCACTTTGATTTCCAGATTGCC
1181	GATGGTCGGCAGATAAGTGGTGGG
1182	GTTCACACGGGTTGACCAACATGT
1183	GATTCAATTGCCCCATTCCTGCAT
1184	TACCGGAAACTGAGCCTCGTGCTA
1185	GGATCTTTACTCAGGGGCAGAGCC
1186	CGCGAGTGCTTTGTTCTGTGTGGA
1187	GTCGTCGCGATGGCGTACATCCTT
1188	ACGGGAATCTCCCGAAGTGCGAGC
1189	GGTCGAAATGAGCCAGCAGCAGAT
1190	CCATTGGAATACTGCGTGCGGCTT
1191	GGAAGACTTCGCGAGGGCACAATG
1192	AGGGTGACTTCGAAGGTCCGAACT
1193	TCGTCCCTCTGGTGGTCGAATCAC
1194	TGTGCAAATTATGCTGGGCGTGAG
1195	GTCGCCAACTGTCATGTGTGCCCA
1196	CCTCGAACCCTCAAGACGAAACGA
1197	CTTCATCACGTGACCTTTGTTGCC
1198	CCTTCATTCCCAGCAGGATGGCTT
1199	CGGGGACCTCAATGGAGCGTCTTA
1200	CGCCTCTAGCGCTTGTTACGTCGA
1201	CTGCCAGACTCAAAACAGGGACGG
1202	CTCCTTACACCGTGTGAGGGAACC
1203	TTTCATGCCATATCGCCTCGCGCA
1204	TCTGGCTTTTCCTCGATCAATCGT
1205	GTCTGACTGTCTGCCCTGTATGCG
1206	GGTTAATGGAACGGCGTTAACGCG
1207	CTTCGCACTGCGGAATCTCAAGCT
1208	TGCCAGAGGCGTAGGAGTCCTGGA
1209	GACGGGCGAGCCAGTATTAACTCA
1210	GACCTCCAAAGTCAGTCTTGGCGG
1211	CGTTAGAGCATGACCGAACACGTC
1212	GTGGGCTCAAAAATTGGGTACGCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1213	GGGGCAGAGATCACGCGTTCCTCT
1214	TTTCGCCCTACGAAGCGAAGTTTC
1215	TACGGGGTGATGTTAAGCTACGCG
1216	CCTGTGAGTCTGAGATCGCCGTGT
1217	ACTGAAGCTGGAACAGGCCATTCG
1218	AGCACTGGTTCACATGGGAGTCCA
1219	TAAGGAAGATCACACTCCCTGCGC
1220	CACCACACGCTAAAATTGAAGCCG
1221	GCTGTCGCCAGGATCATGTATCGT
1222	TTCGTTCGTGCACTGGATTCTTGA
1223	TCAGCTCTCCTTGTGCTTGCAGTG
1224	ACGACGAGGTGAACTTCGTGGGAA
1225	AGCATTGCCGCGGGCCTTGGTTTA
1226	CAGAGGGCAGATGTGACTCCTCAA
1227	CGATATTTCAGCCTCTCAAACGCG
1228	TGCCAGAAATGTTGCCGATTCGAA
1229	TAGGCCACCCGGTGTTCACAATTC
1230	GAGAGTCAGACCGAGGGACACGAG
1231	GAGGCGATCCTGGAACCACGCAAC
1232	CCAGAGAGGCGGGCTACTGACTCA
1233	CACACAGTCCCATCGTACGGCAGT
1234	TTACGTTGCGGAAGCGTGCCTCTA
1235	ATGTACACGCTGCAATCGTGTCCC
1236	ACTCGTCGTCGGAAGCGCCCAGGT
1237	ATGCGAGAGCAGAATTGAGCCGGT
1238	AAGTTGGTTCGTATTCACGCGTGC
1239	TGGGCTTATCGCCGAAGATTGCTA
1240	CAACGGCGAAGACCCAGAATTTTA
1241	AGCGTACGGCGAAAGTCTAGGGAC
1242	ATGCATCCAGCGTCCCCTTGATTA
1243	ACCGTCATCAGTCGCAGGCTTCTG
1244	TCTTGACGGCTGGGCATGATTGGA
1245	TTAACATTCGGACCCAGGACCTGG
1246	TGGTGTCGAACTCCCTTGCGTGTT
1247	TACTCCAGTCGCCTGCGCGCAAAC
1248	CGCAATGCCGTAAGCATGCCAAGC
1249	AGTCCGCGCGAAATACGAACAGTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1250	ATGTTGCACGCGCACTGTATCACA
1251	GGGATCAGCATCATTGGAAAGGAG
1252	ATCGCCTAACTACCCGCGGCGTGC
1253	TGGCCAGGGAACACAAGCTCGGTA
1254	AAACATGGGTCGCGTCTGAGATCA
1255	GCGAGAGCTGCGATTCCCTTTTAG
1256	CCGGCCAAACAAGAGACGAGCGGA
1257	AATGGGGCACAGTCTCGCTTGACA
1258	TGTCTCGGGCCTTCAGGACACACT
1259	TCCACCTTCATTAAGTGGTTCGGC
1260	GCTTCGGAATCATCCACCTGTCAT
1261	GAGCCGATGGGCTATCGTCGTCGG
1262	CACGAATTACGCACGCACAGAGGA
1263	GCTGTGACGCTCCCCTCAACTAGG
1264	CGCTCTGAAAACGCGGGCTACGTT
1265	GAGTGCTGGACACCGTAGCCAGGA
1266	CCAACCCCAGTGTAGGCGCAAATG
1267	GAAGTAGGGGATGTTGGCCGGCGG
1268	CAACGTGGGCACCTGTTTTAGCAG
1269	CTAGCTGCGATCCGAACCTCTACG
1270	CATTGAACCATCAGCCAAGCTGCG
1271	AGACTGGCAATTTTTCGAGGCCAA
1272	CTGGCCGTCCATGAGTTGGTCCAG
1273	CATGCTGAAACACGGGATTGCCAT
1274	CGATATGTAAGACAGCCGTCGCAA
1275	AGCGTAACCTACTGGGAAGGCACC
1276	GTGCTCGTGGCACGTACAGGCCTT
1277	GTTCGAACCCCGCGATGTTAAATG
1278	GTTGTTAGGAGGCTCGAGGCTGCT
1279	ACTGGTGCTACGCGGGATATTTGA
1280	CTGGGAGCTATCCTCAGCCGAATC
1281	GAACTCGCCGCTGCCGAAGGGTAG
1282	TTCGATCGAGGAGCAAGGAGAGTC
1283	GGGGAAAATTGAGGCCTTAGCCAT
1284	CTAAGGTCAAAGCGCTGTCGCCAG
1285	GTGAGGCTTACCCCGTGCTCTTGG
1286	CCGTAGCGGTGCTCGACCAGGTTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1287	TGGGGACGAATCCGAATGTAGTGA
1288	GTCATGTAATTGCATCCCACGGGT
1289	CTTTGCGCGGTGGTCAATAAAAAG
1290	CACTCGAGATTCAATGGGCATGGT
1291	CTCGGGGATGCCCTCTTGGCATTA
1292	CGAAACGTGGTGCAGAAACCTGAA
1293	GGAGTTCACGAGTCGAGCAGTCGC
1294	AGCCGTTTTCAAAGATCTCGACGA
1295	TGGCTGGACATTGTCTGCAATGCA
1296	ATCGGCTGCCTCAGTCCCTAATTT
1297	CCAGCATGGAGTTAAGTGAGCGCG
1298	TTCATATTTACGAATGCCGGGTGC
1299	CGAAATCGCACAGGAATTCGCGTC
1300	GGCAATTTCGGGACACTCGTTTCA
1301	TTTGTGATTGGGGGTATAACCCGA
1302	CCCAGCTAATCCAGCTTGGGCTGT
1303	AAAATCGTTTGGCTGTAACGTCGC
1304	AGGAGATTCATCGACTTCCGGGAA
1305	GCACGGGGTCTCAATGCTTAGGGT
1306	GCGCAACAAGTAGCCTACCGAGGC
1307	TAGCAGGCTGATGCCGTCTACACA
1308	GCAAGCGGCGATCGTACAACTTGT
1309	GCACCTCTGGTAAGCCTGAAAGGG
1310	CGAGGGCGGTGAGTGCATACCGTG
1311	GGATTAACCGGAACTGCCCTTCTG
1312	GATATTGGGTCCGGCGCGCATTAC
1313	GGCCTTTAATCTCCGGTCGCAATG
1314	AACCTTAGTGCGGCTAGGTGGGGT
1315	CACGCTGACGCCAGTGTGGTGAGG
1316	GGTTCCCTTGACCCACCGAATTGA
1317	TTCTGACAACATCGACCCTGGCTC
1318	GCGAGCGAAGATAATCCCCAAACT
1319	GTACTCTGTGCAACGGTCCCGAGT
1320	ACACGCCAGGAACAGTGTCTGTGA
1321	AAGGGAATTTAGCGCGCGTGACTT
1322	TGACGTACGCGTTTTAAGTGGGGA
1323	CTTAGAGGGACGAGGCCATGAATG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1324	GGACGACTCCGCAAAAAAGGTCGT
1325	TCAATCCCAACATCCAAAGCCTCA
1326	GCACTGGTCTACCAAGCTTGTCCC
1327	ACTTGTCGGAAACGAGACCGAGCA
1328	TCAGGAAAGGCCTAAAGGCGAAAG
1329	GGAATGTAGTCAAGGAGGACGGGG
1330	GCACGTGGTAAATGAATTGGCGAG
1331	GATCATCAGGGGTTATGCGTCGCG
1332	CTCACTCATTCTGATTGCCCGCGG
1333	GGGGTGATCTCTCGAACGTCACCC
1334	AAGGTTGCTGCTAGCGTACCTCGA
1335	TATAGATCGCCCAACAGGCAGGAG
1336	GTTTGGACCTGTTGGGAGTGGGCA
1337	ATTGGGGAAAACCCGGTCTCAAGG
1338	TCGACGATAAAGTGCTCACGGGAC
1339	CGATAGAATTCAATGCAGGGCGGA
1340	CGGTTCGCTACGGCGGCTGGTTTC
1341	CCAGGTTTCGGTTAGTCGCGCTAG
1342	ACGACCTTACACTCGGATCCGACG
1343	TCGCGTTAAATGGACCAAGGGGCC
1344	CCAGAAAGAAAATGGCGCCCGGAT
1345	GATACATCGCCGCCTGCTAGGCAC
1346	GAGATCACACTCGGAAACCGGATG
1347	ACTTCGCGGAAAAAGGCTGGCATT
1348	CCGAGCTGCACGAGCACACAAAGT
1349	TTCCACAAGGCGGCATAGTGAGGC
1350	AGCAAACTGGAATCCGGAAAAACC
1351	CGCTATGTCGCAGCATGCATTTAC
1352	AGTCACGCCCAACGTCGGTTCTTT
1353	AGTGGGCGCACTTGGCCTTAAATA
1354	ACTTGCAACTTCGGCCGTTTGACT
1355	CAAACATCAGGTTCATGCCGTACG
1356	AGCGTGACCACCCTACAATGGCAA
1357	GCAGGCATCCGGCAGAGATGTCTC
1358	GAGCGGCTAAGAGGCCAGACCAAA
1359	CACAGAACAGGGTGTTTCCCGCTA
1360	ACTTTGCAGAAGGCCCAACACAAG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1361	CCTTCCTGGTACTTTGTGGGCGAC
1362	CTACATGCTCACCCCACCAGAGTG
1363	ATTTTCAGAATAGCCCCGCCTCGA
1364	CAATTGCTACGTTGACGCCCTCTG
1365	CTGTCGCCTAATCCTCGGTGGCCG
1366	TTTGTGTTGGCTCCGTACATTGGA
1367	ACGTGACGGGAAGGTGGTTGAATC
1368	AGTTCTTGCGTTGCACGAAACAGA
1369	GCTCGCCGCGCGTCTTTATGTCTG
1370	ATGAACATCGCGAGGCAAGCCTTT
1371	CAACCGCGCCCACCAACATTAAGG
1372	TGATCGAGGACGGCTTGGTAGCCT
1373	GGAGGCATGCCTTCCGAGAGCAAC
1374	CACCGATCCTCAACGCAATTGCTA
1375	GGCCATGAATTGGGAAATCCATGT
1376	CTGTTCCAGGCGTAACCAGCGGGC
1377	TATGTCTGGCTCGCCATCAGAAGA
1378	GGAGTGACCAGCACAAGCATCGAG
1379	TCGGACTGGAAGTAACTCGCATGA
1380	GTAGGGTCAAGCACGATTGAAGCC
1381	CACCGGCGGTTCGACTAACGTGAC
1382	GAATGACGCGCAGTGCATTTGAAC
1383	GTGCTCGTCTAACCGCGGATAGAG
1384	GCGGACCTGGGTTAATTGACGCGC
1385	TTTTTGATGTTGCGCACCGGGCTA
1386	TTGCGTCAGCGCATCTGCTCGATT
1387	ATGAGCACGCCAGTTCGTTCCTTT
1388	TCAACGGTAAAGAATCGCCCCGCA
1389	CGCGATTGACTGAACCACACCTCT
1390	GCGTGXAAGATGACGGCCGGTATA
1391	CATGATTCCACCTCGATCGGCTAG
1392	CTACGACAAAGCAACCGTGCAAAA
1393	ATGCCGTGTTCATCTTGATGGTCC
1394	TTCGTGGAGGGACTTTGGAGATCC
1395	GAAGCGCCGTAACGTACACCGTCG
1396	AGCGTGCGCTTGGCTATAAGGCTA
1397	ACAGTCAGGAGTAACGCCGCTCAA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1399	ACTGTGTCGCAATCAACCCGCAAA
1400	TGCAGCCAATGCGGAACTTAGAGG
1401	CCCGCTATCCCGGTCTTGCAGTTC
1402	GAGGGCGCAACATATGCAGTGCTG
1403	CGTACGGACATCGATGACGCAACG
1404	AGTCTCCCGAGAAACGCATAAGGC
1405	AGGAAGTGGATGAACGCGGCTGCA
1406	GGGTTGCTCACCCTCGTCATCAGG
1407	TAGGAATGCGAGTTCCGGCGGTAA
1408	CTCCTCACTTCCAAGCTGCGGATA
1409	TCAATAGCACCTAGCATGCTCCCG
1410	TGATTCCTGCGCTTTCACAGGTCG
1411	GTATGTGCGGGATGGAAATCACGC
1412	TACGGCAACTGTCGATACGAGGGC
1413	GGTTCCCTATCCAGCACTCCTCGC
1414	ATAAGCGCGCCACAGGTATGTACC
1415	GAAAGTCGCCAACAGACTCGAGCA
1416	CGCTAATGCCTCATAGGCGTGTGC
1417	ATCCCCGCCGCACGAAGTACCAAG
1418	GACGCTGCTGATGGCTTTATCGAT
1419	CTCTCCCCGTCGCTTCAGAGATTA
1420	TCATGTGGGCCGTCGTATCAGTTT
1421	GGCCTGAAGGTGAATGGTTACGTG
1422	AGCCTCCAAAGCCGGTAGAGTTCC
1423	TTGTCGTAGGCGCTCACCTTAGGA
1424	GCCTGAGTCCGGGTCGGGAAAGAA
1425	GGCACTATACCGGTTCTGGACGCG
1426	CCGTGTATACGGAAAGGTACGCCA
1427	CCCAAGGCAAGTGTGCATCAGTCC
1428	GGAGTGCATCATGGCCAAATCTGG
1429	CCATGTTACGTCTGCGCACCACAG
1430	GGCGTTGAGCTTAAAAGCAGCGAC
1431	TTGGCACTCTGCAAGATACGTGGG
1432	GATCTGCACTGCAAGGTCTTGGGG
1433	CGATCAACTTGCGGCCATTCCTGC
1434	CGGCTGGGGTCACAGAAACGAGTA
1435	GCGGCTAGTTGTACCTAGCGGCTG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1436	TCGTCACTGTTAGAGAGGCCTCCG
1437	AGTGTCGTGAGCCCTAGCGGCGCT
1438	AGGACGCAGGGATTCAAGTGCAAC
1439	ACCGATGCGCGGTCGGTCTCATAC
1440	GGCAGAGGGTTAGGGGGTTTTTTT
1441	GGCAAAGGGTGTTTATGGGAGACC
1442	ACAAGGCTTCGGCTGGCAGAATAC
1443	CATATCCGTTCCTATCGCCAGACG
1444	AAGCCTTTGTGGCCAAGGCCGCGT
1445	CCGAACCATGGCTTTATCCAGTGT
1446	GTTCAGCAGTAGCTCCCTCCTCGA
1447	GCGCAGTGACACCATGATGC1TVC
1448	ACGATCCATTTTGCCAGCATGCAA
1449	TCCCTTCATTTCGGGTTTTTAGCC
1450	TCTTCTTGCCCACATTOCCTTTTG
1451	TGCCTTTTGATTGGTGGTCACGGT
1452	GACCCTCACGGTCATCAGAGGGAG
1453	CCGTTCAACACAGTGATACACGCG
1454	CACCAGGGGATAGGTGCGGTACGC
1455	GGTCGGAACTGATCTGTGCGATCC
1456	TGCTCCTTCCTAGGGTCATCCGTG
1457	GTGGACTTTGACGCCGGCTACCGC
1458	CTGATCTGTCGGCGGTTACTTGCC
1459	AGAGGAGCGGAAAAAACCGGACGA
1460	GCGACGAAGAGATCCAGCAAGCTC
1461	GGGACTTCCAGCTGAGGGACGAAA
1462	GGCGCACTCCAATACCCACTGTTT
1463	GCGCTTGGAGACTGTCAGGACGTG
1464	CAAACCGCTGGTTTCTCCACCTGT
1465	GCGATTGCTTGGGATCGGTGACTA
1466	CTCAGCGACATTTTTCTGGTGGCG
1467	CAGCGGCGTCGTTTACTCAGGACT
1468	GACAGCCGTGAACGCTCAGCCGTT
1469	GGGCCGTAGAGGCATCGGGTAAAG
1470	CGCCGCTCACCTGCTTAAAGCATT
1471	TGCCAAATCGCAACTCTTGAGACA
1472	CCCCGATCGGGTGTAATTCTCCCT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1473	CAAGGTCCAGGTGACGCAACCACT
1474	CGAGCCTTCAGTGGTATGCATGCG
1475	CAGCAGCGTGCCCATCTCGACTTA
1476	CGGACCAAGATGGCAGTAATCCAG
1477	CTACCACGCTCTGCGCGGGCTGTA
1478	ACGTGGTTAGGCATGAGCTGCGTC
1479	CGACATATCCGACATGACCGGATG
1480	GCGCCCAGGCTGTGTTAGAAAATA
1481	AGCTGGGACTCCGGACCTTGAGTG
1482	CGGTCGTAACCGCTGCTACAACTT
1483	TCGTTCCTCTGGAACAATTCAGCA
1484	CGGCATCTCCGGACAAAGGTTAAC
1485	TATCTTGTCGAGCGCCACTCGGAG
1486	TGCAAGGGAGAAAGCCCCATGAGC
1487	ACTGCATAGCCCAGATCCGCTTGC
1488	TGTGATTCAGTCGAAGCAAGGCCG
1489	CATCCATCTACAATTCGGGCCAGT
1490	ATGAGCCGTTCAGAAAGCCAAAGA
1491	ACACTGGAATTGCTAGACCCCGCG
1492	CTGAGCTGCGTGGGACAACTCCGC
1493	CAGCTACTAGGGCGCGATGTACCC
1494	ATAATGATGGGACGAGAAGGCCCC
1495	CGACCGAGTGTTACGACATGGTGC
1496	TGCAGTACCCGCCGCTCCACTAGT
1497	ATGCTAGCGCGCCTGTCAACGTAC
1498	AGACTCACTGCCGGCTGATCAAAT
1499	GCCTGGTGCGAAGATAGGGATTCC
1500	GGAAAGTTGGCGGATCCGAGCACT
1501	GGCAGTGAGCAATGTGTGACGAGG
1502	TGAGGTCCTCCCGGCGGACTACGA
1503	CTCGCCTTAGATCGTGGTTCCGCA
1504	GTCGAGGAATATCATCGCAGCCAG
1505	GCGAATGCAACGAGACAAGAAGGA
1506	TTCGCCACCAAGTCGGCATTTGTT
1507	CGGTGGCTGACACTTGCCGGATTC
1508	CAAGGAGCAATCAGATGGTCGGAG
1509	GTGACCCGGTCCGTTCTAGCTGTG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1510	CTCTCGCCCACATAACTGCACAAA
1511	AAACCTGCCTAAGCAAGCACTGGA
1512	TTCCATATTGTACCCCGCGCATGC
1513	TGCTTGCGATATCACGATACTGCG
1514	TTAGTGTTCGAGCCTTGAGCCGGC
1515	CTTGTTGCGCGAGTCCGTCTGGGA
1516	GTCAGCTGCCTGCTGGTGCTCTTC
1517	CATCCCTCGAGGTGTAGGCAACAC
1518	CAGATGCACTCCGACGGGATTCAG
1519	CTGAGCCTCGCGAAGCTGTGGCAT
1520	GCTATGCCACGCCGCAGATAGAGC
1521	AACACCAACCATACCGTCCGTTCA
1522	GCCCAGAGCTAAAGCATGTCTGGG
1523	AATGCTGCAATGCTAGCGTCGCTA
1524	TCCGGACCCACTATCCAATCCCCA
1525	TAAGACCATGTGGCACCAAGGTGC
1526	ACAGCCACACACACGCGCCCACTA
1527	TAGAACCGAGCACGGCGCCTTGTA
1528	TTCGAGTAAGCTGGCAGGACCACT
1529	CTTTCGCAGGTTCGCAGACAATCC
1530	TACGTCCTGTGCTGTTGACACCGG
1531	GTTCGGGTCAATGTTTCGGGGAGA
1532	CCCTGTTGTGAAGGGGTTTTGTGA
1533	GGCAGATTGGTGAACCCCAGATAA
1534	CCCTCGGTGTGTTCAAGCCAAATC
1535	CCCGCGAACATTTGAACAGCTTAA
1536	CCGTGTCAGTTGCTCCCTGGCACG
1537	TCCGTCTCAGCCGCCTCCCTATCC
1538	ATAGCTGGGTCACCACAGGCGGTC
1539	ATAGGCAAGCGGTGTAGCACAGCG
1540	TTAGAAGCCGGTCTGGATTTGCGT
1541	TGCCGACCTTTACCAGGATCCTCG
1542	GCCCACACTATAACCAAGCTGGCA
1543	TTGCGCCACTAGTACGGATCTCAA
1544	CTTGCAGTTTATGCTGACCCGTCC
1545	TGCCTCCAAATTACTTACCGCCGT
1546	CCCGTATGCGGAAGCTATGGGCTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1547	TCGTTCAACCCCACACTTCAGTTG
1548	CAATGTGGGGGACATTTCAAGGTT
1549	TAGCGTCGCACAAATGGCTGACCG
1550	GGTGGCTTCGTGACAATATCGGCC
1551	CAGCGGCGTCCGAAATTGGCTCTC
1552	GGCTTGCTCTCGTTTTTGATTGCA
1553	ATGCGAGGAGGACACGACCGTTCC
1554	CCTGTTCACTACGACCCACGGGAA
1555	GTGCCACGGAGTGCGACTGTTGCT
1556	ACACATCCAAGTCTGACGATGGCC
1557	CAGCCCGAAAGGAAAGCCTCCGTG
1558	AACTGAATGTAGGTGGGCCCCTGT
1559	ATTTTCGACGATAAGCTGGCCGGT
1560	TGAGGGAGAACCCGAAATCTGCTT
1561	GGCGACTACATCCCCAATTGCTTG
1562	GCAGACGCGGCCTTCCATACTTTT
1563	ACAACCACATGACGTGTAGCTGCA
1564	CTGCTGGGCGCGCAAAGCTTGTTG
1565	AAGCCTTCTTTGGCTTGCTCCGCT
1566	TACCTGCTGCCTGGAGCAAGGCAT
1567	GACGCCGCAGCCATGAGTGAGTGT
1568	AGTTGGCCGCTTATTTTGCTCACC
1569	AGGCGCACGGAGAACATTTGCCAA
1570	CCAGGCGCCTTCGACAGATCCTCA
1571	GTGTCCCCTCCAGCTAGCCAGTTT
1572	GACAACAAGCCAAGGTGACACGTC
1573	CTACACCGCTCGTGACTCGGCAAA
1574	TGGTGCCATCAAAGCACGTTGTAC
1575	ACAATGCGTGTTGCGAAACGCATA
1576	TTGTCCAGCCATTGTATTTTGCGC
1577	ACGAGAGATAGCGGACTCCTCCGA
1578	AGCTTTGTCGTCAGGCGAGCTCTT
1579	GACAGTCGGCGTGCAGTTTGTTGT
1580	AGCTAGCGACGGCCAACTCACGTA
1581	CTCCTGTTCGGGGCCGTTACTGGT
1582	ACTGACCGACGCAGTGCCACATAG
1583	AGGTAGGGTCTGGTTTGACTCGCA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1584	CCTCCATTTTAGCGCGTTGCCAAT
1585	TTCTTAGGATCCGCGCACTCTTGG
1586	GTCGAAGGTGTCTACCGTGCGCAG
1587	GTCACTCGGCGGCCCAATCACTCG
1588	TCTCGGTCACCCGTCTTGACCCTT
1589	GCCCTCGACGAACTCATCCTGAAC
1590	TCCGGCGTACTCTGACACGGCGAT
1591	AGCCAAATGCTTTCGTGGTTCGGA
1592	ACTCCACGCCGCATGTTGCTGTGA
1593	GCTTCGAGTCGGTGGCATCTGTAT
1594	GGTCTTGGGCCATCGACTTGCTGC
1595	GGTATCGGACTGCACTAAGGGCAA
1596	AGCCCATGCGTTCCGGATGATTTG
1597	GCCAGGGTTAAAAGTGATGGGCTC
1598	GACGACGTGCTGGCTACGAAGGGG
1599	TCCTATTGACCGTGCATCGTGATC
1600	ACCCGCCTCGACTCCACAACTAAA
1601	GATGTGGATCACGACCTGCCAGTA
1602	GTGCCATTGCCACCCATAATGCGT
1603	TTAGCCTGTGCACCCAGTCAGGAG
1604	TCCGATGGGAGAGGCTGATCTCAC
1605	CACTACTGAAGTGGCCTGGCGCTG
1606	TGCGGCCATAGCGATGTGATAGAT
1607	GATTGCGCTTAACGGAGATGCACG
1608	TCACGTTTGACAACGCCAAGCATT
1609	GCATTGTTTGCTAAAGGCGGCATT
1610	AGTCGCTCTACGCGTGCAACGCTG
1611	TAGCTCCATGGAGGTCCGAAAGGG
1612	GACCGGTTGGACCTCACTGGCTTC
1613	AAGCCGGACAGTCAATGTGCGTAT
1614	TGCCTCGCTGAGTTCTTCACCGTG
1615	TCGTAGACCTTGCTTTTGGGCTCA
1616	ACCGCTATGCGCCCTACAAAGCAT
1617	TAGCGTCACCGTAGCTTGGGGCAG
1618	CTCTCAGCAACTGATGGCACCGGA
1619	AAAGGAAATGTGGTGCTGGTCGGC
1620	CCGGCTTAGATGGAGAACAAGTGC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1621	AAGTAAATCGCCTCGCCCAAACCG
1622	TGGGCTGTTCAGCCTACCGGACGT
1623	GTTTCGGTTCAGCCATGGGCCTAC
1624	GGCCAACATTTCTAGGGGAGTGCC
1625	TTCTTCGTTGGGATTGTCCTCACC
1626	TGCACATTGGGGTACGGATCTGAC
1627	GGCAGTTAGACGGCAAACTGCAGG
1628	CGCGTCAGGCTATGAATGGCTCTT
1629	GCTGAATGCAAACCTCGGAGCCAT
1630	CGCTCTGGCGGATTCATTGTTTTC
1631	TTTTCAATCAACCCTCCGGACGTA
1632	GTGGTGGAGTCTGAAGCACGACAG
1633	AAACAGGTCCGGATGATGTCTGGA
1634	GTACCGCGTGTACGCCACCGTTAG
1635	TCCAACCTACATTTGCGGAAGGAA
1636	GACGTACCGTCGTCCCGTGAGTTG
1637	GGCAATCCTACAACCGACGCTGAT
1638	GGCGGCTGCAGGGTCTACATCGAG
1639	ATACTACGCTGCAGCTGCGCGGGC
1640	GGATCGCAATCCCTCCGATGACGA
1641	TGGCCTTGCACGGGAGCCGAATCT
1642	AGGTGCCGACGAAACGACGAATAT
1643	GCTGTTTCACCGTCGTCGTTGTTG
1644	CGGTCCCAATGTTACAACCCAGAC
1645	GCAATTCCAGCCACTTTTGACCAA
1646	ACGGGCGAAAGCTCGGTACGGATA
1647	CGACCCGACTTTTGCTTTCGAGTG
1648	AATTCAGTGTTTGCGTCATGGTCG
1649	CCTGTATGAGGTTCTGGGTCGGCT
1650	TGGCATACTTGGTGCAAACCCCCT
1651	TCGCCAGTACAGAAACATGCGGGC
1652	CCCGCTGTTGCTCTCATCGTGGAG
1653	GCCACAATCTGACCCTGGGAATCA
1654	GCTCAGTCTCGGAAGTTTCGGCTA
1655	CTTCACGGGCCAACGACGGTCGAG
1656	CGACAGTTCCGTCCGTCTTGAGGA
1657	ACGGAGACGCAGTCGAAACGTCCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1658	CATGCATCCGATTAAGGGGATCAC
1659	ATTGCGGGAGTCCCTAGCTTTCTG
1660	GTGTGGAAGATGCAATTGGAACGG
1661	ATACAACGGTAGGTGACAGGGGCG
1662	GCCGTGGGAGTAAGGGTACAAAGG
1663	GCACGTAGGTCGGCTACTACTCGG
1664	ACTGTGATCTCTTGGGCAAAGGGC
1665	CATGCCTGAACAATCTCGCATCCC
1666	GAGCCTGGCTCCACAGCTGTGCTC
1667	CTTTCGATACCATCGTTGGCGATC
1668	CCCGGAGGTGAGGCATTGAATATG
1669	CTCATTCAGCTAAAAGCGGCTGGA
1670	GAAATGCCCTGGGGACTTTTTGCC
1671	TTTGCCTTCACAACAGACGCAGCA
1672	AAATCCCAAGACGTCGGGGCGTAT
1673	CAACGGGCGGTAGCTAAACCGTAA
1674	GGCCAACGACAATGCGAAACCTTC
1675	GACATCACGCAAAATCTCAGCGCA
1676	ACGTTCCGTCCACAACCGTATGTT
1677	GCTCATAGGTCTTCCGTAGCCCGT
1678	GAAACGAGTCTCTCGCGCCCTAGA
1679	CGGGACAGAAGCAAGTTACATCGG
1680	TGACCGCTCGATACCAGGAGGGTG
1681	CTGGCAATAAAGACCTTCCGACCA
1682	TGCGCGACGTCATGTTGGTGATTA
1683	GTTGGTTGTGGGAACACACCCGCT
1684	TGTGGGTTCGGAAACACAGGAAGT
1685	GGAAAAAACGGCAATTAGCCGAGT
1686	TGGTGCGGAGTGCCCTCTATTGGG
1687	AACCAACAGGCTGCAGCCCAGACT
1688	AAACAGATCCATCTGCACGCCAGG
1689	GGAATACCGCGGCGATTATGGCTT
1690	TACTGTTCGCGGCAAACCGTCACT
1691	GATCTCTCGTGGAGCACGTTTTCC
1692	GGCATAGCAAACCTTGACCTCCAA
1693	ATCTGGGATTCGCGAGCCAATATC
1694	CGATCAGGATATCATTTACGCCCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1695	ACGGTACCGAAACGGTCTCAGCGT
1696	CTCCCATACCTGCGTTCTTACCGA
1697	GCACGAGAACCTAATTGTCGCACA
1698	GCCACACGATCAAGACAGCGCATG
1699	CCCGTTAACTCACGAGCGGTCAAT
1700	AGAGAAGGTCATTGCCTGTCGGTG
1701	CGGGCCCTCTTAAAGTAGAGCAGG
1702	ACATCGCGTCCGAGGGAGTTAGCG
1703	AATGCCTAATCGAGCCAGCGGATC
1704	CTCGATCTTTTTAAACCGGCGCTT
1705	CGTTCCTGGAAGGCAGGGTCTCAC
1706	CCTGTGCTTACTATCGGCGATCCA
1707	GTTAGTCGCCCTATTGGCCTGGTT
1708	CCGGTGAGATGACTGTAAATGCCA
1709	CGTGGTTTAAAACATCGCGCTTCG
1710	TAAGACGCAGAAGATGGGGTCCAC
1711	CACCACAGCTTCTTTGTTCGACCC
1712	TCGGGTCCGTACCACCACTTTTGC
1713	CCAAGCCCCGAGTACCGAAGATTT
1714	TCCGTGATATGGTCGTGGCGCGGT
1715	TGTCTGTGTCATGGCACCTCGCAT
1716	AGGACTGCACTGTGCACGTCTGAT
1717	CCATCCTCATGTACAGCGCCGCTG
1718	GTACCCGCGCCTTCCTCGACACAG
1719	ACGGGTCCTGGTCGACTAAGGCTT
1720	CGTATCGAAGGCGTGTACAACCGG
1721	TGCCCGCCCTTTATGCAACGCTCA
1722	AAACTTACGAGACGGCGGCTGCCA
1723	AAGTCTGACAAACGGAACGGGTGT
1724	TAAGCGCAGACCAAAGTATGCGGC
1725	GCAGTTTTTCAGATCCTCCGCAAA
1726	TCGGAAGCATTTACGCGATCTCAG
1727	CACAGAAACGGTTGAACGAACGCC
1728	GCATGCTCAGATGGTCGTGCTCAC
1729	AAGGATTCTCGCTTCCGGCATGAT
1730	GGTGGGGTAGCGCTGGTATGAAAA
1731	ATTATTACGGGACCGAACCAACGG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1732	GCGCGAGTGTCATGATGTTCACGT
1733	GACATTCGTGACTTGGTCGTCCGC
1734	TCATTAGTGCAGGCACCGATCAAG
1735	GAGTTGTGCGGAGTCATCGGAGTC
1736	GCCTTTACAGATTTGGCGGGCTAT
1737	ATGGCGTTTGCGAAGTCGATACAG
1738	TGCATCGGCCTCAATCAGAGAACT
1739	ACAATCATGGCAATCTGGCAAATG
1740	GACGTGGAAGAGTGCAGATCAGCA
1741	AGGGCAGGGGACGGACAGTAAGTC
1742	GCATAGGGCGAATCTAGTACGGGC
1743	TCCGGCGCATCCTCATTAGCAACT
1744	TGGCCGCTTCCACTAATATTGGAC
1745	CCGGCGGACGGCTCTTGTCAATGA
1746	CGAGCAACCCAAAAGGAAGCAGTA
1747	GCGTATGATTCGGCAATCCGCCAG
1748	AGTACCGCTACAACGCTGGTTCGC
1749	GGGCAGGCCAGGTCCACCTGAGAA
1750	CCACTTCTGTGACCGAACCGTGCT
1751	CCTGGTACCAGGCAGCAGTTGATT
1752	TTAGGGTACCGTCGAGAGACGCCA
1753	GGTTGCTTGTGCGCGTGAGGTAGT
1754	TGCTTCGACCGATGAAACTCGAAG
1755	TGCCACCCATACTATGCCCAGTGG
1756	TGTGCGGCAACGCGTGAAGACGTT
1757	TGAGAGAAGCTGGCCTCGGATCAG
1758	TATTGCGAATTOGAGTACGTGCCC
1759	CGAGAGGGGTTCCCCAGTGATCGA
1760	TGCCTGGGGTGTCGTTCTAATTCT
1761	GTGCGTCATTGTGGGTCATCCCAA
1762	AGGGCTCCCAGCATACCAACGTTG
1763	AACTAGCCGCACCTTTGTGCAGAG
1764	TTAGCCCAGCCCTTCAATGGGAAC
1765	CGGCCTCGGTTGTACGGGTAGTCT
1766	TCTTTGAGGCGCGGACCCGCATAT
1767	GATGGTTCGCCCTTGTGTCGCAGC
1768	GAGATTCAATACAGGCCGCGGGTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1769	AGGGCGAAGGAAGGTTCCGTTTTT
1770	CTCGACCCCTGCCACTACTGGTTC
1771	TGTTCCGCGGTCTACGCATTACTG
1772	GAGACGACGTCCTACACCCGCTAA
1773	AGATTGCGACAGCGACACGTGATT
1774	GATACCGTTGGGCATTTCTCGGTA
1775	GATTGGGAGGCATTCAGCGACGGA
1776	AGGAGGAAACGAGGGCGTAGGTTC
1777	GCCAAACAACGTCTGACGCCTAGC
1778	TTTAATGCGGAAAGGATGCACGCG
1779	TTATCGGCCGTTAAAATGGGATGG
1780	CCTTGGATTCGTTCATCGCTAGCA
1781	AAGTGAACGTGCAGTGGTCTTCGA
1782	TCCTTACCCCTCGTTCAAACGCCT
1783	ATTCCTGAACCATGCATGGCCTGT
1784	AGCGAGACGCTCGATCACGAACTA
1785	GCTGGTCTGGCTCGCTGTTTAGAA
1786	CGTGCGCGGCATAAAGATAGGTCT
1787	TCTGGCACTCACATCGGACAGTCT
1788	ACCATTGGAGGACCACAGAGCTCC
1789	TCCAGGGTCGGAGTACATGGCGGG
1790	ATATGCCGTCGGATCGTACACGCA
1791	TGCTGGCGTCAACACTTCCCGATT
1792	CAGGGCGGTGCGGTGAACTAGCCA
1793	CATGGACTGCCGTACATCAGCTGG
1794	CCGGCCATACGCTGGCAAGATTAC
1795	AGCGGACACCTGTACTCTCCTCCA
1796	GGAGCCACACCAGTCGAAGATGGT
1797	CGCCACCGGAAATTGAAAAGACTG
1798	TGAAACGGATGTTGCTTCTTGACG
1799	TTGAAGCGGTGAAGAGCCTGTCCT
1800	CGAACCAAGCTGCATTGTCAGTGG
1801	GAGTCTGCGCTTGCAATCTTTGCG
1802	GCTGGGTATAGTTGCCTGGCAATG
1803	GCAGGCGTTCCATATTCGCAACCC
1804	GCGCCAACTAATACCTCCACCGCG
1805	TGGCGTTCAGTGCAACGCTGGTTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1806	CAAAACTGACGGGTATGGGAGCGC
1807	AGGTGTCGCTGGAACCCGACTTGT
1808	CTTCCAAAAGCGCAATTGGCTTTG
1809	TCGGGCTTCTCGCAATTCTGTCAG
1810	GCCAAAAGAATGCGCTGGGTAGGT
1811	TGGTGCCCGCACCGAGAGACTGTA
1812	CGAGGCCGTAGTGGGGACTGCTCT
1813	CGATGTGCGCATAGAGGGGACTTT
1814	TGTGCAATCGGCCTTCTCAGAGCC
1815	GATCACCTGGACCGCTACCGTTTT
1816	ATGGGGAGTTAAGGACCCTGCACC
1817	CATTGTGGACAGCCAATGGTGGCT
1818	CCATCACCATGCCACGGTAAGATC
1819	GCACCCGTGTCGTTGGTTAGCAAG
1820	GGAGTGGGTTCCGCGAATTCACTG
1821	GGGGATTTCCTTTCGCAGGCTCGA
1822	CATTGATCATGTGCACTTGCACCA
1823	AGCAGCGCTGCGCTTGTTTCGGAT
1824	CGAGTAACGCGGTTGCTTTGCGAA
1825	TGGCCTGGAACATAGGTGGAACTC
1826	CGCACACCAAGCGTTTATTGAGAA
1827	TCACCTTCACAGTGGGCATACAGC
1828	CAAATATCCCTGAGCCCTCGAGCT
1829	GGGAGCTGGTGAGCAGATGTAACG
1830	AGGATTGCTTTTGCGTTATGCGGA
1831	ATCGTTTGGGCGCTACGCAATTGT
1832	CCGATTTGTCCCAAATGCAACGTT
1833	AAGGGTCAAGCTCATGGAGCGGAA
1834	TCTGACGTCGTTCAAGGGCTCGCT
1835	CGCACCACTCCGAGGTATTTGTCT
1836	AAGGGGTGAAAAAGGAGAAGCCGA
1837	AAACCACGCAAATGGCGATACCAT
1838	CAGAAGGGATGACGCCTTAAGTCG
1839	CATGACGAGAGCGGACCTGAAGTG
1840	CTGGACATGTTTGTTTCGCCACTG
1841	AAGACCGACTCTCGTCGTTTGCAC
1842	GCGCGATTACATACCGTTTCCGTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1843	CACTGACCGGACCCAACCTAACAT
1844	AGTGCAAGTCTAGACACGCCCGAG
1845	GGTTGGTGCGAGATCCTGGACTGT
1846	GGTCGTCCCGAAACGTAAACGAGG
1847	GACTAGTACGATCACGGGGCGGGT
1848	CCGACCTGACCCTGTGTACAGGTT
1849	TGCTCACTGCCCACACTGTTATGG
1850	CGAGGAAACACATTTCTTCGGGCC
1851	TGGCACCGGGTGGATTCTTGTCTA
1852	GAGGCACGGTGATAGTGGTTGTGC
1853	ATGCAGATGGATCTTTTTCGACGC
1854	TGCGATAGCCAAAGAGTCGAGGAC
1855	ATGGCGTGTCAGCGAACTGCCTGG
1856	CAATGCAGCTCGGAAGTCAGGTCG
1857	AGGATCAGTGCACATGTCCCCTCA
1858	CACATCTTGGCTGTCACCCGAGAA
1859	CGCATTATCACCTCAATGCCAGTG
1860	ACATCCGCAGACTCCCTATAGCCC
1861	GTGAACCCGAACGAGGGGAGTCTC
1862	GCGTAGGGAATTTGCCTCACGACT
1863	TTTACGCGTCGCTCGGTTGTAGTG
1864	GAGAGGCGTCTAGGCGGTTCTAGC
1865	GCATGCTGATAACGAATGCTTCCC
1866	CTGAAGCTCGTGTGCGATGAGGGA
1867	ACAACGGCATGAGGAGGCTTTTTC
1868	TTTGGAGACGCCAGTACGCGTGGT
1869	GCTATCATTTGGTGTAAGCCCGCC
1870	TCAACATCCAGGGCGGTGCTTGGT
1871	TTCGATGTAATCCCCAAAGATGCC
1872	GGACCTTCGGCAGGTTATCGCCGT
1873	AGTAAGAAGAGGCAGGCCCCACCT
1874	AACGGCTCCCCGTCGTACTGCTTA
1875	CCTATACCGTCGTGGTTCCACGTT
1876	CCGCGCAGGCGCTAATACTCAAGG
1877	AAATGGGCCAGTGAAATCCTTGGT
1878	ACGGTTTCGAATACTGCTGGGCAG
1879	CCGCTTGAGGTTCAGGTCAGAGCT
1880	ATCGTGCCCGAAGACACTTAAACG
1881	ACCTGAACCAGGGCGATTGCTTTA
1882	ACCCTATACGCTGGGCTAAGCGGG
1883	TGTTTCGCGACTAGAAGCCTTTGC
1884	GAAGTTGGCGGCTCACCCGTATTA
1885	TGGCTACACCGCTTAGGAGGAACC
1886	CCACAGTTGCGTGACTTACATCGC
1887	ACTGCCACTGCGTCTGAAGAGTGG
1888	GCGCCAGCAAATTTCGTGTGGTGT
1889	TGCCTCCGTCGAGCCGAATAGCCA
1890	GTACAAACGGGCGCTATTTCGTCC
1891	GCTTCCCTGGCTCTGAACGGAAAC
1892	CGGCTACCCAGGCAGATAAGCTGA
1893	GGTTGGACCCGACAGGGAATTTCC
1894	GGGGAATACCCGGCGTTTGTAATA
1895	TGGTTCGGTGAGGTTATGTTCGGT
1896	TCGGTAGGGTTCAGTCGCTGAGGA
1897	TTCGGAGTGTGCCGGTGCTAGTAC
1898	TCGTACTGGAATGATGGCCGGGCC
1899	TCCGTCGACCGTCCAGCGAAGTTT
1900	AGGGAATATAACAACACCGCGCAC
1901	ATGTCCCGGAAACCAGCTACCTCA
1902	ACCAGCGACTTAGATAGCCGTCCG
1903	GGAAAACCTCCTTTGCGTCAACCA
1904	ACGTGCGTGCATACCCAAGAGGAC
1905	ACGCCACTTTCCCTAGAACCAACG
1906	CGAAGTACGCAATAGTGCCACCCT
1907	GATCCCGGCGGATCACCTATCAAT
1908	AGAAAGCGACCGTTTCAGGCTAGC
1909	CGCTCCCTTTCATAGTCCTCTCCG
1910	GTGGGTGGTCATAACGACAGCAGA
1911	CTGGAGGCTGCATCGTTCGTAACA
1912	CACCATGAGTTTCGGAGCGAGGAT
1913	CAAGCTGCGTTCGATGAGAGATTG
1914	CCTGGGAGCAATGACCGCTCTGGT
1915	TCCGGCGCTCTACCAAGATGAGAC
1916	CGACCGCGTCGCGTATACTATCCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1917	AACATTCGCTAGTGGGGTCCAACA
1918	TGTATGATCATCCGACCGAGCAGC
1919	AGTGCGCCGAGAGGGTGAATAGAC
1920	AGGCTTGTTCTGGACCAGCACCAT
1921	GGGGCCACATAAAGAATTCCGAAC
1922	TGGTGAAGATAAATCCGCATGGCA
1923	ATTTCCACCACGCTCTTGCCAAAT
1924	CGCGTAAAGCTGTCACCGATGACC
1925	TCCCCAACCGGTAACAACAGCGAC
1926	CCTCTGCTCGCCTTACACCCATGG
1927	CAAGCTGCTCCTGTGCTGAAGGGC
1928	AAACGAACGATGGTCGGTAGACCG
1929	TCAGTTCGATGGCTATTGCGCCTC
1930	GGCTCTCAACGGACGCAAATCATA
1931	AGTAGAGTGTTGCGGCTGCCGATC
1932	AGACACTAGACCGCCGTGACCTGA
1933	ACCGAGCACCGAATTTCCTTGTCC
1934	CCGTGGCCAAGATACGAACGAATT
1935	CCTCCTACAGCATCCACATGAGGG
1936	CACTCGGCAAATACGTATGCGCAT
1937	ACCGAGTTGAAGCACGAATTTGGG
1938	GACCACCTCGGAAGATCGTTCTGC
1939	TCAACTGGGCAAACGAAGAGCACA
1940	GCTTAGCCTCACACGTGCATACCA
1941	CTGCGGTCTCCAAGTACCATTTCG
1942	GTTCCGTATTACGGCGGCCATAAG
1943	ATCGACGCAACCGGATAGTCTCTG
1944	CGCAGATAAACCGGCATCTTTCAG
1945	ACCTGCCAATACGGGTCTACGGTT
1946	ACACCTGTTGCCATGCTGATCCGT
1947	AAACTGTCTACTGCGCAATTCCGC
1948	GCAACTAGCCCGTGCTAGGATCGT
1949	TCGTAGTGGTGGATTGTTGTGCGT
1950	GGCTTACTCCTCAATTGCGACACG
1951	CACGACTCCCTGCCAGATTTGATT
1952	CTTAGACGTCGGCAATGTCACGTC
1953	CTCAGAGCACAATCTGCCCTGCCT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1954	GCTAGGAAAGTCGGCATTCATGGG
1955	AAAGCCCCAAAATTCCGCCTAACC
1956	GCGCAACGCTAAGGGACTATCAAG
1957	CGTCCGCTGGGATGAGTCTCCTGC
1958	ACAGGCCTCGTGATTGGTGTGGGT
1959	CATTCTCCTTCCGGGACCACGCCT
1960	TCGGAGTTGACCAAGCTCAGTGCG
1961	ACGCGCCACTGCAATTGCAAACAC
1962	AGTTCATGGAGCCGGCGTATTGTT
1963	ACGTTTAATGCGGGGCCCGCCTAC
1964	TGAGGCTTTAGCCTACGCGCAGGT
1965	CAGCGTTATGAGCGCGGAGTTTAT
1966	GTCCACGTGACCACGGATAGTTGG
1967	GATTATGCTCCTACGCCTGCTCCG
1968	TCGTCAAGGGCATGATGTGTGGGA
1969	GATGGACCGCCAAAGACACCTTGA
1970	TACACGAGGATGGGGTCAAGCTTT
1971	ACACGCACAAAACGTTTGAAAGGC
1972	GTTATCGTGGGCCGATGGTACTGA
1973	ACATGACCGTATCCGCCTGCTTCG
1974	GAAGGCGAACCACTGAAACTACGC
1975	TGACTTTTGCAACGGGTGGAACCA
1976	TGAATTCGTAGGTTTTGGGTGCGG
1977	AGCATTTATGAAGCGGCCATTGCG
1978	TGCTCCTCGCGTTGGTACCGTGAG
1979	CGCAGCAAGAAACAGCAACTGTTG
1980	AGACGCTTGGAGTGAAAACTCGGA
1981	CATTCGTAGAATGCCCCAAATGGA
1982	CCAGAAGGTTCGGGACCCGTCGTG
1983	GAGAAGCCGGTTCTCAGAGCACAT
1984	TTGCGTTGCAAGATATCTGGCCCG
1985	GGGTTGCATGTTCAGGCAAGACGA
1986	CTCACGAAGGTGACATATCACGCC
1987	GCCCGAGATACGGGTTCAAAAAGA
1988	CATCTTCGCGCTTCTTCACTCCGC
1989	TTACACGGTAAGCGTACGGCCGCC
1990	ACCTTCGGACAATGTGGCGTTCGC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
1991	TGAATGGTTCTGCTAGGCCCACAC
1992	CACGCCTGTCTGACATATGGATGC
1993	CGCCTCAACCCAATCTGAGAACGT
1994	TTACGCTTACTGCGAGCTGGGTCC
1995	GGCTTGTGGGGCAATACGCATCTT
1996	CACTCTCCTTTGGATGCGGAACAA
1997	CTTCGAAGCACTTCAGACTTGGGC
1998	GACCAGCCATCACGTAACGGCCCT
1999	AGGAACCGGATGTGGTTATGGAGC
2000	ATCCATGGGCAACTGAGCCTATGC
2001	GGAACAGCACTTGTTACCGCCCAC
2002	TGGCTCGCTTCAAGCCTGTTTGCT
2003	CAAACGTGAGGTCATGACCACCAT
2004	ACCGATGTCTTGAAGTCCGGAGGT
2005	CGAAAATGCATGATGATCTCCCCT
2006	TTTGGTATTCTCGCTGCACCGTTG
2007	GCGTACTCAACCACATTCCCGACC
2008	AGCAAACAACAGCGGTCCGAGCAT
2009	GGACTAGGAGCGGGGATAGCTGAG
2010	CCTTAACGAAAACCTGTCGACCGC
2011	CTCGATCGCATAAGCAAGAAACCG
2012	CCCGTTGTTTGGGCGACAAAAAGT
2013	CGGCGGCTCTCGCATGATCTCGTT
2014	CGGATGGAGAGGAGTCTACGTCCC
2015	ACCAAATCAGACTAGCGACTGCGG
2016	CAGAACAATATCGTGCGTCAACCG
2017	CCTTTGCGCGCTCCGAGTAAGGTA
2018	GGAAACGGCACCTATCTGTCGTGA
2019	CGACCGACAAAACCAAATGCCGCC
2020	CCAAGGGTGTGGGAGCTGAAGAGA
2021	TTAAGTGCGCATAGTCCTCGTGGG
2022	GCCTGGTGGGGTAAGTCATGATGC
2023	GAGCAGCAGATTGATGCGCTTATG
2024	TGCGCCAACTTCCGGAATATTTGC
2025	AACCCCATCATGAAATGCTCTCCG
2026	GTCCAACGGTACTGGCGTGATGTT
2027	ACTCGGCTGATCGTGAGATGGTGA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2028	ATTCGTGGGCGCATCTCGGAATGT
2029	TCCCGTCCTGTAATCCAGGGAACA
2030	CTTCGCTGCACCTACATTGCGCCA
2031	GCGTGTAGATGACTGTGCTTTGGG
2032	CTATGGTATCGAGACATCGGCGGA
2033	CCTCGTACTCCGTCGTATGCACAA
2034	TGGTGCGTCCGTAGTGCCTGCACT
2035	CGCGATCCTAGTTGAAAGCTTTGC
2036	ACGATCCAGGTGTTGGGCACTAAG
2037	CCAATCTAGGATACACCACGCCCG
2038	GATACGTGGGGTATAGGCGGGCCC
2039	CATGGAACAAACCGTCGTAGGGGA
2040	ACACTCGCGCAGTATTCGAGTCGT
2041	CTCAGTCTCGAAGGTGATCCGACC
2042	TCCCAATCCCCGTGGTATCGTCGT
2043	AATCAACGTAGTTCCGGTGGTCCG
2044	CTTAACAACCCAGGGGTTTGGGCT
2045	CCATCCTGAGAGTGACGGAGGTGC
2046	CTACCGCTGCATGGCGTTAGATTG
2047	TTATTGGTGGCGGACGGAGTGAGT
2048	TTAAGGGTGAACTCAACCGCGTGA
2049	TTTGATTGAAACGCTGCGCACTAC
2050	TCATGTGTAGGTCGCGGCCGTCAC
2051	CTCCGAACCTTCTGGGCCTCTTTT
2052	CTGTTGCCCATTGGCCCGACACTC
2053	CACGATCGCTGAGCAACACATCAC
2054	CGGATCATAAGCGTCCGCCTTCGT
2055	AGGTTAACGCAACATGTGATCCGC
2056	GGGAAAAACAGCTAAGCCTTGCGA
2057	ACTTATTGCCGGGATCCGTACACA
2058	TGCGGTCTGGAAAGGAAGGGAGGG
2059	GCTGCCACCTGGACATCGCATACA
2060	GCAGGCATGACAGTGGCGTAGTAC
2061	GCGGCCCTGATGGTTTGGCTGAGC
2062	TCCCCATTTAGTCCCCTCCATCAC
2063	GCAACACAAATGCGAGCGTAGGAG
2064	GGCGTTTGTATTCGAGCCACGTAG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2065	GGTAACGTCGCACGTGGAATTCCG
2066	ACTTCACAACGGTCCGTTGGACAC
2067	CCGAATTATAAAGCGCAAGGCACA
2068	GGACCCGATAAGACTCTGACGCCG
2069	ACCCGTTTCTCGTAGGAACCTGCT
2070	CACGTTCGACTGTATCTGGTTGCC
2071	CCTCGGATGGGCCCATGACCTTGA
2072	GGACGCCTGCTGTAGGGGTTTGAT
2073	CTCGAGCGTGGGCTAAAAGAGCAT
2074	TTTACTTCTTAGGGCGCGTTTGGG
2075	ACCACCAACATAGCGCGCACTAGT
2076	TGGTTACACGGCAGCCCGCGTAAG
2077	TTATGGTACGTTGCTGCGTGCGGG
2078	ACCGCGGATCTAACGAATCCCATT
2079	CATGATCCCGCCCTTAGGTTAAGC
2080	TACCGCTTCAAAGGGTTGCCGAAT
2081	GCACCGCGTCAATATTACCGAGGA
2082	GTGTCGCGGCTTTACAGAAGGAGA
2083	GCAAGCCATACCGCAATAAACTCG
2084	ATGAGGTCGTGCTGCGTTCACGAG
2085	CGAGACTAGTGCCGATGCAGGGTA
2086	GCCTCATCATAGACGCTGGATGCA
2087	GACAGGCGTCGGTAAGCTCTCAAG
2088	GCTACGAATCTTCCCTGTCGCCAC
2089	TTTGGCAGAACGTACCAGTGGGGT
2090	GGACAATAAGCACCGGAGAATGCG
2091	TCATGAACCTTCTGATGCCGCGAA
2092	CGCCGCATTACCTTAAAAACGTGC
2093	ACGAGTCCAACCGCCTCATTGATT
2094	GCGAAGAGTTGCTACTCTTCCGCC
2095	CGTCGGCAACAATCTTTTTCGTGA
2096	AATCCTGTGCACCCGTGAGACGCG
2097	AACCTATATGCATCAACGCGAGCC
2098	GAACTTGGCAAAACAGCCCGGAAA
2099	CTCTATGGCCGTTTGCCGTCTGCA
2100	AGTGCACCGGGTTGTGGACACAAT
2101	CCTGGCTTTTCACACGCCAAGAAA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2102	CACTCAGCGTAGCCTGAAGCCTGG
2103	GAATTATCGACCGCAGCGGTGTCG
2104	GTGACATCACATGGTGGCCGAGCG
2105	AGCACCTTGCCGAGTCACCAGTGA
2106	TAGGTTGCAGGAATGGTGGGCACC
2107	GTCCCATACGTGTGGTACGCGGAT
2108	TCGGATACTCTCGCGTGCCACGGG
2109	CAACGTTCGCCCCTAAGCCCAAAT
2110	GTTAGGTCACCGCGGCATATCCTA
2111	GTTCACCGGCCTCTACTTGGGTTT
2112	AATCCGCGTCTAGGTCATGTGGTC
2113	GCTACGCCTCTGGAGGTGGTACCC
2114	CAGGGAATGCTACAAAGGGTCCAA
2115	AAGGGTTAGCTGCCCGGTTAACAG
2116	CCTCGCAAGCGCGATATTTATGCC
2117	GCCTCCCGGTCATGGTCAAGGGAA
2118	GCTGTTGAGCGGCGACCTGTGCAC
2119	CGCTGACTTAGCTCTGATGTGCCG
2120	TTCATGGCATTCATCACGAAGGAA
2121	TAGTGTTATGCCCGCGTGTGAATG
2122	CATGTAAGGGCACGGTCGTGGGCA
2123	CAGGAAGCTCGCTCCGTGATGCAC
2124	CCTGCTGATAGCAACCTCACTGCA
2125	ACTACGAGGGGCAGGGTCTAGGCG
2126	CATAATGTGGGTGCTGACGCCGAT
2127	TAGCGAATCCACACAGAGCCGCTC
2128	TCGCGAAATCCCTAAATCCTGTGC
2129	TGGCACGAATCAAGCCACCAACTC
2130	GCGGACCGTCTTTGCTATCTGACG
2131	AGGCCCCGCCTTGTAATTGGTCAT
2132	CTGGTCCCATACGCCGCTGACTAG
2133	TGCTAACTGCGGCCCTACAGAGTC
2134	TGGTTTTATGTTCGGTAGCGTCCG
2135	AGCTCAAACTTCTCCCACGGGATG
2136	CGCGAAGATAGTGAAATCCGCATC
2137	GAGTGAAACCTCTCGCGGGTTGCA
2138	TCGAATGCTCTGCAGTGACGTCAA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2139	AGGTGGCAATGATCGACGACCCTG
2140	ACCTTAACACAGCCGACCAGGTGA
2141	GTCCGGAGCCGTGCAAAGCAATAA
2142	TCTGCCTGACTGCTACATGCTCCC
2143	CTTTTGGGGATTAGAGGCCGACAA
2144	GGCATAAAGGCTTCCGTTCCTGTC
2145	GCGGACCGTAAAGCGGGCAGATAG
2146	TTTCAAGAGTGCATCGAATCCACG
2147	CCGGCATCCCTTCTCGCTGTTGCC
2148	ACACAGAGACGCGAACGGAGTGCA
2149	AGCGGCATTCTCCCACTCGTTACT
2150	GGAGCGTACTGCGCCTCGCAAGTC
2151	AAACCCGAATGACACGGCAGATAA
2152	GGTCGGGTCCATATCCAAGTAGGG
2153	AACCAGCGGATCGATAAAACGACA
2154	GGTGTCCACCCGTTAACGCCGGTA
2155	AGCGCGACGTGGCTTGCCGTTAAA
2156	TCCCACGGCTATAGGTCCAACGAC
2157	ATCAACGAACGATGCCGTTAGGTG
2158	GAGGCTAAGCCGTATGGCCGAGGC
2159	ACGGTCCGAAATGGTTAGAGGCAC
2160	ACGCAAACCATTCCTCGAGTAGGC
2161	TTACACGCTCGCTATTGGGCCATA
2162	CTCGGCACGGGTTTAGAACGCCGG
2163	ATTCGGTAAGGTATCGGGCTAGCG
2164	AGCACACCGTTATACATGACGGCG
2165	AGTCCCTGCCGTTCGCTCATGGAA
2166	GGGCTTATGACCAGTCAGGTTGGA
2167	GGTCACCACACGAGTGCCTGGTCT
2168	TTGATCGTGTCTCCCGAAACCCTC
2169	ATTGTCGCGATCGGCATTTCTTAA
2170	GGGTCCAACGACTTCTCGCTGCTG
2171	CAAATTCCTTGGGGGCCATAGTGG
2172	CCAGAGTATCCGCCGTTAGACGGT
2173	TCCTGCAGATCATCTCGTGTCTGG
2174	TGCGGGAGATTTGAACAAGCTGTA
2175	TTAGACGCCGAGCTAGGCAACGTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2176	TTTCGGCAGAATCTCCGATTCAAC
2177	TGGCGAGCAGACCTACAAGACAGA
2178	GGCGACAGACCGGTACATCGGCCA
2179	TCTAGACCTGCGTTTCGTGGGACC
2180	GCCGAGCGTGGTACCATACGTTCA
2181	TAATCACACCCGCTTTCTGTGGCT
2182	GGCCGGAGCCATTGGACACTTCTT
2183	CCTGTAGACCTGCATGGATCGCTG
2184	GTGTGTGTGTCTGCGTTGGGGCAC
2185	ATCGCCGTTCCCGCAAAATAAGCA
2186	TGGATCAACGGGGTAGTGAAAACG
2187	AAGCGACGATGCTTTCTTGAGCTG
2188	CACGGGCACGTGTTCTACGCTTGC
2189	ACGGGCTGGGACAAGAGCTAGAAA
2190	GGTAACTGGCTCCGCTCTCACATC
2191	ACTCTGGCTGTTGGCGAACGTGAC
2192	GACCGAGGACCAGTCCTTGCTCTC
2193	AGTAGCTCTTGCGGCCTAACGGCA
2194	TTCTTGTCCTGGGGGAGAGCAGTG
2195	TTAGCAGGGAGGTTGTCGGCTCAT
2196	TCGGGAGAGGGCCTTACCAAAAGC
2197	AGAACGTGGATTGTACGCTCCGCC
2198	CTTCACAGCCTGGAGCCACCAATG
2199	GAGATCGATGAAACGCACCAGCGG
2200	GGGTCCAGAGTTGGTGTGGGATAA
2201	CCGTCCACCCCAGATAGGAATCAC
2202	TGCCTCGCTTCTGTGAATCTACGA
2203	GATCACAGCGTCCGCGCATAACGG
2204	ATGACGCCTTACATGACGCACCTT
2205	GCGTGGAATAACGCCCTTAGTTCA
2206	GGTCTACCATTTCTCGCCCGACCG
2207	ACACCTCTCTGGCGTAGACGCTCA
2208	GTAGAGGTGCTCAGGACTCGTCGC
2209	GTAAGCAGGAGGCGAAGGCGCGAA
2210	TCTAAGGGCCGTTTCAATCGACCT
2211	AACCTGATTTCAGGGTCAGCCCGA
2212	GTCACGCGATTGGCCCACCTATTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2213	ACGATGCCGCGCATGTAACCTAGT
2214	TGAGAGATGTCTCGTCAACGCCTG
2215	GCATATCTCGCGGTGACAGACGAA
2216	TATCCTGGACCCAGCCTTGGAGGA
2217	GACCCAACGTCGAAATTGTGCGAT
2218	TGAAAATCGGGGCATCTAGTTTGG
2219	CCGCGAAAAGGATTTGTGTACGCA
2220	CATTCCATTTATCCGCAGTTCGCT
2221	CCTGTCTGTCGAGCCAGCGTCTAT
2222	TCAGCGCGGCTAAACAAGTTATGC
2223	ACGCCTACGAACGACCCAAGAGAG
2224	TGCGCATCTACCATTGTGTGGATC
2225	AAGTCCGCGCTCGCTCCTGTAATA
2226	GCTGGGTCATTGCTCGAGTAACCA
2227	TGGAGCGTTCTGGCAATGACCGAC
2228	CAAGTCAATTCTTGGCCAATTCGG
2229	CGTTCATGCAAGGATCCCAGGTTA
2230	ATGCCAATAGAAGCTGGGGATGCT
2231	CCTAACTCTCCCTTGAGGCCGTTC
2232	ATCTCGGCGAAGGTTCCAAACATT
2233	GCGACAGATTACGCTGCGGTTTTC
2234	AAGCCCAGACGGCCAACACGTTAC
2235	TCAAGTTCAAATCACATCCCGTGG
2236	GATTGTCGTTCTGTCTGTGAGGCG
2237	ACCGAACTATGTTCCGGCATGGCA
2238	CGTCATCGGGTGTGCAATGCCGTT
2239	CGGACGGAGTCACGTTTGTGCACT
2240	TAAACAAGTCGTGTGCCTTTGCCG
2241	TAATTACTGGCCTGTGGAGCAGGC
2242	GGAGCGGCCCGAATGGTGCTCTTA
2243	ACTAAGCAAGGCTTGGATGTGCGT
2249	AAACTAGCTAGCCGCACCCGCAAG
2250	GTTGTTCCACCAGTGATCACGCAG
2251	GCCGCTGACAAGATGATCATCGTT
2252	CTTTCATAAAGCCAACCGATGCCC
2253	CTGACTGCATCTCGAAAGCGGGTG
2254	ATTTCTTCGGAGAATCGGCCACGT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2255	CATTTCGGGCCCTAGCTACTGCGC
2256	CCGATCCCGCACATCCGTATCCTG
2257	TATCACCGGGAGCGTCTTATCGTG
2258	TAGGGCTCGTGCACCGATTAGAGG
2259	GCGTGGCACTCGCTTGTCTAGGTA
2260	CTCAACGAACTCAAGGGCCGCTAC
2261	AGCCTGGTATCGACCAATCCTGCA
2262	TACGCGTTCTAGTTGGCCGGATCC
2263	TTTATGGGTTTGTGCCTGATGGGT
2264	GGGACCCCTAGCAACGTCACCTTA
2265	CTGCCTCCCCAGGAGTCATTGGAT
2266	AACCCCGCAAGACCAGTACCAATC
2267	GGTCACATACGCGCTAAAAAGCGC
2268	AAATGGCTCCGACCAGTTAGGGAC
2269	AACGCGGCACGCTTAAAGGTGCAT
2270	GATCGCACGCCGATTAACCTTACA
2271	CCTCCTGATTGGGAGTGCGGAATT
2272	CGGAGGGTAATAGGCTCCTCTGCG
2273	ACAAGAACTGGACATTACCGCGGG
2274	TGTCGTCTTAAAGGCCTTTGTGCG
2275	GGTGACCATGTGGCGTTTTAGCTT
2276	CACGGTTGCGCACGGTACCAGAAC
2277	CCTTTATTGTTTGGTCCCCTGCCC
2278	GTGCGCCTGCATTCTACCGTCAAT
2279	GTTTACGTTGATGGCTTGCCGCCG
2280	CCGTCGGTGGTAGGACGTGAATGT
2281	TGATCGCCCCAGAATCCCTGTGCT
2282	AAGCAGCCAAAAATCGGTTGCTTT
2283	CGACGGGACTTAGTAGCAGGGCCT
2284	CCGATTCGCGAAACGACCAAGTAG
2285	CCACCCCAACTCCAATCTTTCTCA
2286	GTGCAGTAGACGACTACCGGCGTC
2287	TTCGCCCATCGTATCAAGCAATTC
2288	GAATCGCGACTACCCGTCGGGTCA
2289	CCAGCACTCGCCATCGGTTATAAT
2290	CGAACCGTAGAACTCCGGTCGGTG
2291	GCACCATGACAGAGCCCCAGGATG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2292	TGGGCTACCGCAGAATAAGGGTGA
2293	TGGCCTGTCGTGTCGAAGGAAACA
2294	GCCTCACCGATAGCGAGCGTTTGC
2295	GTGCGCGCCGGCTAAAACGAGACA
2296	CCGCAGACGAGTTTCTTGTGACAG
2297	GTTCGCAATCGCGTGCTAGGAAGC
2298	TGTTGTACACATGCATCCGGTGAA
2299	CACTGAACACGATATAAGGGCGCG
2300	CGCGATGGTTCTTAGCAAGACGAT
2301	TACACCAAGGAAGAAATGGGGACG
2302	CGTGCCTTGCGTTTTAGGTGCAGC
2303	GTCGTTTGTCTGGGCATTAACGGC
2304	CAGGCTCTCGTTCGGTACAAACGT
2305	CGGACACTGTTTCACCAGAACCCA
2306	TACCCATGATGCGGAAGAAGCGTA
2307	CTGTCCTTAAGCGGATGAGAACCG
2308	CGGGAGATGAGAACGGTTTTGTGC
2309	TAGATCGCGACTGTACTCAGGCCG
2310	TAAAACAGTTCGCGCGACTGTCGT
2311	CGAGGAGCTCCACATAAGCCCAAT
2312	TGGCTAGGGATGGGGAATCATCTT
2313	AGGATTGGGTGCCTGGATGCATTG
2314	TGTATCTACCGGCCTGAAGCAGGT
2315	TCCCTACGCGCATGACTCGCTTAC
2316	TGGTCGATCACCTGTGACAGACGC
2317	TGGGGGTAGTCCATGCATCAATTG
2318	CCCTGCCAGGATTACTATTCCGGA
2319	TCCCGCACGGGGAATTTAAGTAGA
2320	GTGATGTGCAGGAACTTCTGTCGC
2321	ATTTAGGCATGCATGCGCTTCTCA
2322	TTCGGCGCTAGTGGACGCCGTCAA
2323	GAGCTTCATCTCATCAGTTCCGCG
2324	GACAACTCCACTGCTCCAATCGCA
2325	GGCCAAGGATGGACCTTACGATGG
2326	GGTTCCGGAATTTGTCACCGCTTC
2327	GCGCTGGATAGTCTGCGAGAAGCC
2328	TGAGTCCAGTGCTGCCACCATGAA
2329	TTGAATTGGGTGTCGGAGCGTTCT
2330	CGGCGGGCAGACAATGCTTTGAAC
2331	GGGTCTGTCAAAGAGGGTGTCTGG
2332	CTTTGTGCAAGACGAAGCACCCTT
2333	ATCGAATTCCGAGGAGGTCTCCAT
2334	TCCGACCCTCAGAGTCGACTCATT
2335	ATCAACGGCCACCTCCTCGCCGAG
2336	AGCCACGGAATAATTCCGTCCACC
2337	GATCGCTTGCGTATCGCAAAGACT
2338	TCCACGCCTTACCATCAACTGCAA
2339	GCCAAGCGATAGGCCAGAACTCAG
2340	AGCGTGTGGGTCATTTTAGCACGA
2341	GTTATGCGCGGCTTACGAGTTCGA
2342	TCTGTCCACGTAACTTGCCTGCAG
2343	TCGGCAGCCAATGATCATACCTCT
2344	TAAGCCCGATCCGGTCCTGTGTTT
2345	ACATGGCAGACTAACAGGCCTCGC
2346	CATGGCTGCACTCTAAGTCGAACG
2347	TCTTCAACCCACGCGGAACGATTG
2348	CTCGTGTCTCCAGAGGATTGTCCC
2349	TGAAGGCATCAACCCAGAGGATTT
2350	ACAGCTCGAAGGCAGCCACATTGG
2351	ACAACGAGTACCGCGACAGAAGGG
2352	ATAACCGAAAAACCAGCCTGCGAT
2353	ACAACTCAGCACTTTCGACGTCCA
2354	CGGGTTACTGGGTATCACCAATGC
2355	CATCGGTTATCGCTGCACGCGCGT
2356	GAAGGAATCCCGGATAGTCCGTGG
2357	GCATGGTCTCAGCCAAAGAACCTG
2358	AGCCTGCGACGTTTCCCGACAGAC
2359	AAGAAAGGCGCACGGGATCGATAT
2360	TGTCGCGAAGCCAACTTTCAGTAA
2361	GCGGCATGCAAGGTAGGTCTGGAT
2362	GGTGGCCATCTCCTCGAATTGCAT
2363	GCGTGCATAAGTTGCACATTGTGC
2364	TTGAGGTAGCGTTTTCGCGCATAT
2365	ATCCCACTTGTGAGAGGGCGCATT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2366	CGGTCAGCGAGCAGACATCAACCT
2367	GCGTATCTTCGGGTCGAACACTTG
2368	ATGCCATTGAACTCGCACTTTGCG
2369	CGATTCCCATCATAATGTGGGTCC
2370	CAATTTGGATAATCCAGCCACGCC
2371	CGGCTTACCCTATGATTCCGTGCA
2372	GGTGGACCATGCGCTGTGGTATGA
2373	TATTTGTCGAAGATCGCAAGCGCC
2374	GTCAGTGGGTTTTGAGAGCCCGCA
2375	AGGGGGTCGGGAAATCTGACAAAA
2376	TGCTTGCTATCCGAAAAAAGCAGG
2377	TTATCGGATCAAATTCGGCTTCGG
2378	TGCAGCAACGAGTTACCCGGACTT
2379	TATACATGTCCGGAGGGGCACCCA
2380	TGCAAAACCGGAGGATGAACCCTT
2381	TCGGTCTAATGTCCACGCAGACAC
2382	ATGTGTTTGCCACGCGCTCCTATT
2383	TGGCGAGGCACGGCTCTAATTCGG
2384	GCGACGACCCGAGCGACTTTTACA
2385	CTCAGAGAGTCTATCCGGCGCCCT
2386	GGAACATCTCCTGGGTCCCTCAGA
2387	GCAACGCAGGGAAGTACTTAGCGA
2388	TGACTTGGGCGGACAAAGAAACGC
2389	AGATCATCGGGACGCTTCATGCTA
2390	CCCTTCTGACCGCTAAGGCCATAA
2391	CGTGAGCCGTGGGGTGTCTCTGTA
2392	TACCTTGGTCGTCTCCGCTTTTGT
2393	TCGCCGCAAAATGCTACGTGAAAA
2394	GAGTGACCTAATGGCTGCCCGACT
2395	AAAGGAACTTGGCCAACCCTATGG
2396	TGTTTTCGCACTCCACCTAATCGC
2397	CAATGGGTTTCATAAGGGCAGGCA
2398	GCCTAACACACAAGGGTCCCTCTG
2399	CGTCATGCGGTCCGAGGATCGATC
2400	CCACACGGGCACGGAGTAATATCT
2401	CATCAGACATAGGTCGCGTGCCGA
2402	AGATGAAACCAAGGGAGGACGCAG
2403	GGCTACCCATAGGCTCAGCAGCAC
2404	GGCTTGTGAGGGTGTGTTCTCGAC
2405	TGTGTTACGGCGAATGCAACAGTC
2406	CGATAACAGGTCGCGCCGTTACTA
2407	TGATAAAGTGAGGCTCCAGCGCGA
2408	AATTGTGCACGGATCTGCACGGCG
2409	GCCGATACTGAGCATTTCACTGCC
2410	GCAATGTACTGTCACCAGTGGCGA
2411	GGCATATCGGTAACACTTGGTCGG
2412	GGGTCTCAAACCAGCGTGGCCGCT
2413	GTCTCCGGGACCATTGAGCTGGAG
2414	GGCCTTCGGCATTCAGACGGGTTG
2415	CGTGATAGGCCACAGCGCTCAATT
2416	GGCAGGCCCGCGAGGATGATTAAC
2417	CGGGTATGGTTGATAACAGCGTGG
2418	ACGACGTCCTTGGGACCGTA1TGT
2419	CTGATATCGAGCCTGAGCCTTTCG
2420	TCCCATTGGCCTGTATGCTGGCCT
2421	GTGTCGTCGATTGTTTCATCGACG
2422	CGAAAGCCAGTAGCCGATTGCGTG
2423	GGTTCGGCTTATTCCACTGCGACA
2424	AGCGAGGGCTAACTTTTTAACGCG
2425	CGGCGCTGATGACGGGACTCGATT
2426	TCACAGTGCTCGGCGTAAGGACTA
2427	CCCATTACGAGCACACACCATGGC
2428	GGCCGCTAATCTTTACGCATCACG
2429	ACGGCTTCCTAGTGTCCAGCCCTT
2430	CTGTCAGGTCCTACCCAATGGCTC
2431	CACAGCCCATCCCACTGAACTGCT
2432	ACAAACGATACACGCAACGCTGTG
2433	TGGCGGCCAGCTAGCAGGCGAAGT
2434	ATCTCGAAACGATGCGTGCCTAAA
2435	ATCTCGAGAACAGCGTGCGTGCGG
2436	GAAGAAATCCGCCGACATCTACGG
2437	GCGGAGCAACCTTGGCTGTTTCTA
2438	CGCGTTCCGAAGACTTGTTGTTTG
2439	TGACCTGAAGCCCATCCATAAGCA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2440	TGGTATTCATTCCGGATAAGCGGG
2441	GCGTTGCGGGTCATTGATGCAAAC
2442	ACCGCTTTCTGTGTAGAGCCCTGA
2443	CAAATAGACAATCGCAGCTTCGGG
2444	TGTCCTGACAAATCAAGGTGCAGG
2445	AAATTGCACTCGCGGAGATTTCCT
2446	TGACGCCCATTTCTATATGGTGCA
2447	TGTTCCGACAGGGCACTGCTAGAC
2448	TCGCTGGCTTGGGAAGGCCTTCGT
2449	GTGCACCTCCGTTGGCGTAGAATG
2450	CTCATTTGGGACCGATCGGGTTGC
2451	GCCAGTGTCTGTCAATGGATGGGA
2452	TTGCCCGGCAGGTTCTGTGTAATG
2453	ACCCGCGAACCGAGACGCACTTCT
2454	TCCGTGCGATTGGTCAAGGTTGAT
2455	AGGGCGTCTCGGTTGAACCTCGGT
2456	TGACCGTTCAAAGAGCAAGCCAAC
2457	ACACTCACCTGCTGTCCCTGCTGA
2458	GCGTTTAACTCCTTGGGTGGTGGT
2459	CGCCTGCGCAGGTAACTCTCCGCA
2460	AATCGAATTTCCCAGCGGCTGTTT
2461	AAGCAGGTGGGATCCTGGGGATCA
2462	AATCCCAGACTCGCTCTTCGTGCT
2463	ACGGTTATAAGGGCCGGCTGCGAC
2464	TACGAGAGCGGGCTTAGACGTCGC
2465	GCGATTTTGACCCACGGTTATCGA
2466	AGCTGTATAATTTGGATGGCGCGA
2467	TCCGCGAGTCTTAGCCGATTGAAC
2468	GGCATCAGCTCCGTAAGCCGATAG
2469	TGTTATTGGCAGTTCGAGCGACAG
2470	GCGAGCCTTTTTGCTTGGGAAGAG
2471	AGAAGAAAAGGTCAGCGTCGACGA
2472	CGGGTCGACCCTTGAAGCATAACC
2473	CTCGGTTTTCACAAACTTACCGCG
2474	GCAGTCCTATCCGGAGCCTGACAA
2475	AAGGTGCGCTATTTGTTGTCGGTC
2476	AGTGGAATCCATGCCGACACCTGA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2477	TACAGGCGTAATTCCTGCGAGGGA
2478	CCGAAGTGCGAGAAGCACGTTGTT
2479	AAGGACTGGTATGGCCGGAGCTTT
2480	GGACACCGCCAACCTCATAGTTGC
2481	AATGGTGTTCGCCTGGACTACCAC
2482	TAGGAAAGCGTACACGGGAATCCG
2483	TCTCACCCCAATGATGAGGACGTC
2484	CGTGTCCGTGTGACACTGTCCATG
2485	TCCAGG CTGTTGCGGATACGGTAG
2486	GTAGGCAAAATGGTCGCGATCAAT
2487	ATCTCCGTGGACCCGATTGTGACA
2488	GAATATGCCGTCAACGCTATGGGC
2489	TTCCGGAAGCGTTTGGTAACTTTG
2490	TTCGATAGGAATACCAGGGCCTGG
2491	GGCCATTTGAGGAGGATTATGCAA
2492	ACCTVCTGACCTGGACTTTTGGCG
2493	GACCAATCCGCAGTTGAGCAACAG
2494	TCGGCCACTCACCATGAGTGTAGG
2495	AGCGCTCACATGTTCGAAAACGGG
2496	TAACGCAAAGGCGCGATCCTCGCT
2497	TGGGTGGGCCAAATATTACTGCAA
2498	GTCCTCGAAAGGGGCATCCAAACA
2499	CCCATCTGGTGGGAGGCGTTATCA
2500	GTGCGCGGTCTGCAAACTCGCCAT
2501	TGTGTTGCCAACCCTAGGTCATCA
2502	CTGATGCTGTTCTCGTCGGTTGAC
2503	AAGCTGCAAAAGGTGAGCGTGGCA
2504	TCTGACGCGTGCTTGGGAGTCTAT
2505	GAATTACTTGGAGGCGCCGTGCAA
2506	GATTCTTCCCGACCTAGGTTGGCC
2507	CGCAGCGTATCCCATGTTGCTTGA
2508	GAGATGGAATTGTTCGCCCAAAGA
2509	GATGCCTGGATCGGTCTAGCGTCA
2510	GCAGCGACTGCTAAGCTATCTCGG
2511	AGGGCTAATTTACATCGCCTTGCC
2512	AAGTGCACATCCTCACGAAGCGAT
2513	TCAGGCAGCCGTAATTAAATGCGC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2514	CCACTGGGGAAATCGCACTGTTGG
2515	TTGTCCAAAGCCACCTACGACAGA
2516	TGGGCGGAATAGATTGGGTGTCTT
2517	TAGAATTCGCCTCTTCTAGCCGCC
2518	CATTACTTCCTGCAGATGCGATGC
2519	GGAAATGCTAGCTGGGGTAATCGC
2520	GCCGCCACTTGCGAATCTACATCT
2521	ACAATAGCGGACAGCTCGCCAGAT
2522	AGTTAGGCTCTCGGTGCGGTCCAT
2523	TGGGCCTGAGAAGCGGTTAATAGG
2524	ACGCTCTGAGCGACGCCTATCGTA
2525	CCTGGTGATCGTGTCCCAGACTCA
2526	GCGTGTCCATTCGCTTGAGGTTTC
2527	ATCCTGAACGGCGATGACCACCAC
2528	TTACGTTTCTCACCGATCAACGCC
2529	GCCGTCTTGAGTGGCTAAAAGGCA
2530	ATCTACGATGCGGCTCGAAGTGTT
2531	AACCAAGACTCGTCCCCAAACGAA
2532	AACTGCGGTGGTGGAGGCAGGTGC
2533	CCTGAGTGGTCGGGCTGGAAAAAT
2534	TGCGATCTTCTCCACCTACAGCGC
2535	AGGCGCTTAGAACCGTGAAGGCAG
2536	TGGAAAATTTTGGGAAACGCTGGA
2537	CCAGCGCCGCACCTTCTCCAATAG
2538	TAGACGGCTGGCGAATCTTACGGT
2539	TACCATACAAGAGAACGAGCCGCA
2540	GTAGCCGAGAGCAATTTTCACCGC
2541	GCAAACTCCCCTGCCCTTTAGCCT
2542	ATCCCGCTGATAACCGCCAGGATA
2543	AGTCTCAGTTCGGCGCAACGGTAG
2544	AACCTACAGTCGCCGCAATGCATT
2545	ATACACGTTTCAGCCGGCAACAAT
2546	ACGACGGGACGTGCCCTCGTTGAT
2547	AAGTCCAAACTCGAATGGGGCAGT
2548	GATTTATTGGCGCGGTAACGACCT
2549	TGTTTTCAGAGGCTACCCTGCCAT
2550	ACGGTCTCAGGGAAATGCGATCTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2551	GACTTGAAACCGCCTATGCCCACA
2552	CGATCGGTTGTGTGCTGTCTTACC
2553	AGTAGCACAATGCCTCATTTCCGC
2554	CTCGCTATCTACGCGTCTCCGAAA
2555	AGCCCGTTACGGCATCTAGGATTC
2556	TCGCGATGGCGAGAGTTCAGAATA
2557	TTACAGGATTCCAAAACCCGCAAA
2558	CGGTACCAACGCGCGGGCATATGA
2559	TGCCAGTATTATCCGTGCCAGCCG
2560	ATTTCAGACCTCGGGACAACCTGG
2561	GAAGTGCGCGTAACTTAGGGAGCC
2562	TTGGCCAGGTCATCACTCTGCCAT
2563	ATCGGCCGGTATTAGCTGCCCTCC
2564	CGCAGGTAAGGCCGAGCAATGTTT
2565	TTGGGAACGTGCTAGGCGGCCCTC
2566	CCGCAAAAGTAGAACAGCCTGGGT
2567	CATCTCGGCACACTGGTGCTGTAT
2568	ACGCGTAAATCAACGACGTGGTCG
2569	CGTAGGTGGTAAATGTTGGCCCAG
2570	GTTGGGATGCTGCTTCACTTTGGG
2571	TTCGAGCCAGAATAAAACGGTTGG
2572	AGAGATATTCGGCCTCGGTCGAGA
2573	CGACAAAGTTTCTCGCGAGCAACT
2574	ATTGCCGCGTCTCGTATCAAAAGA
2575	CGGAGAATGGATGCAGGTTCTTCG
2576	TATAATCATTTGCGACTCGCCCCA
2577	AATTTTCCCCGATTTGAAGAAGCG
2578	TCGCATACTTCGTCGGCGAGTATT
2579	CGTGAGCCGTTCTCATCCAAGCGG
2580	GCAGAATCGAATTGGGGTGGGTTT
2581	CTCTCGGTTTCTCAACCGAGCTCG
2582	GACCAGTTAGTGCAATGGTTGGCG
2583	TTCTCGCACAGCTAGTCAGCCGAT
2584	CCAAGTCTTGCGTGAGCGATCCTG
2585	GCGAAAGTGGCTCGTATTTCTCCA
2586	CCTCGGGACTGTCCGACTGAAAAA
2587	AGGCGAGTGTACGGCTCATCCATG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2588	GCGGCTCTGCCTACGATATTCACA
2589	TGCACCTGTCTGTAGATTTGCGGT
2590	CATAAAGCACGGACGCGACTTGAT
2591	CCCTCAACGTAGGGCGTGACTTTC
2592	GGGTCATCGTGCAGTTATGCCGTA
2593	CCCGGATAATCCTTTGTCCAGCCG
2594	TCCGATAAGCGAACTCACATGGGT
2595	CCTGCTGGTTCGGTCGTAAGCGAA
2596	GAGGCACCAATCGGTCTGAAAATG
2597	TACGAAAATGGTTGCGCCGGGTCT
2598	CCCAAAGATCGTATCACCACCCAA
2599	AATTGCCGGAAGCAGTCAGAATCG
2600	CCGAATCAGCCGTATTTGCTGGAA
2601	CCCGCTTATCTGTACTCGATCGCA
2602	TTTTGGGGATCCCTATTAGGCGCA
2603	AGTGACAGCGCTCACCACGGTCCC
2604	CCATGAGTGTTTCGGGACATCGTA
2605	GCCACATTCTGCTACCTCCGTGTT
2606	TCCTGTGCTTTGTGACGTGCTAGG
2607	GACCGCATATACACCTGATGGGCC
2608	GTAGGCCCGTCGTTAACCATCTCA
2609	CGGCTCGCGAAATGGAGTTTAGCG
2610	GCTGATCGGCTTTTCACCGCTATA
2611	TATCAAATCGTTGGCACGCGACTA
2612	TTGGCGAGGATCCCTAGGCGTACT
2613	AAGTCCTGAGGCCGTTCGGTTTCT
2614	ACTCCGGACATCTCGGCCAGAGAT
2615	CCAAGGGGAACACAGGATCGTAGA
2616	GTGGCCTAAATCCGCCTTCTCAAC
2617	CACTCCGTCTCGTCCATTAATGCG
2618	TCAAGAACCCAGTGCCGGTCAGCA
2619	GAATCAATTTTCCAGGGACGGGAC
2620	GAGAGCATACGCAATGTTCCCTCC
2621	ATCGGTGTGCTGGAGCGCCAGAGT
2622	GCCTCTCCTATGACGATGACCCAC
2623	TGGGCGCGCTTTTAAGACTACATC
2624	CGTTGGGTACCGTTCTATCAACCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2625	GCAGTGAGCTGGGTTCAATGCTTC
2626	CATCATCCACACAGGCAGGTGTGT
2627	AGACAAAGGTCCCCATTGCGAAAT
2628	ATACTCGTCGACGAGAAGCGGAAA
2629	GCAGAATGTGTTGTCTTCGCAGCC
2630	CACCATGCCTTCATCTTGGCCTAG
2631	ACTCTTCAACGCCAGGTTAAGCCA
2632	GCGACCTGCGGCGTGTGTATTCTC
2633	TCGGTGTATGCACCCTTTCTCCAT
2634	ACCGTCGAATCTTGCGGCCAATGT
2635	TAATGCATGCTCCCGGCTCACGTT
2636	TCTGTACACACCACGTCGTGCACA
2637	CATGGGGTTGTCAGACGACACCTA
2638	AATCTGATGCTCGCTGTAGGACGG
2639	TCGAAACCGCGGGAAAGGGTAAAA
2640	CGCTAGGGCCTAGGGGCACAGACA
2641	TGGGGGACGGGCGTCTAATCCTCC
2642	AGGCATGCACCCATGCTGCCAGAG
2643	TCCCAATGGCCTGTCAAGCATAAA
2644	GAACCTGAGCCTTTGCTAGCACGA
2645	CGAATTGATAGCGTTACGGGCGAA
2646	TTGCACGCGCGCGAACGACTATTC
2647	TGCGGTGAAGCAGTCCAAGGTCAG
2648	TGAGGACCATCCAATGGATCGGTT
2649	TCGGTGATTGGTAATTTGGATCCG
2650	GCGGGCAGGTAGTTTGACTGGATG
2651	CAAGCACAAGCCCATGAAATTTCA
2652	CGGTACAGCGGATAGCCAAGGATA
2653	CCATGCTCTTCGCTGCAGCATACT
2654	CGCGGCAAAGATTAATTCCCGGCG
2655	GAAGACCCGTCCGGGTTTCCATAC
2656	CTGGCAAGGAGGATGTGGCTCGTG
2657	CTGTGCAGGGGGTGGCTCTGTTGA
2658	TTCAATAATGATCACGAGGCCCCA
2659	TGGTGATGCGAAGCCTTACCTTTG
2660	CTGCCACCATCTACGGCGCAGTCT
2661	TTTGCCCAGCTCTCGCAGAAGTTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2662	AATTCAGACGCCACATCGACGGTC
2663	CCGTGGTCTGCCTCGATTACCTAC
2664	GGCGAGGAATTTCGGAACCTTATG
2665	ATCCGATGATCAGATACCGGCTGG
2666	CCATAGACTAGCGCCAGAGTGCCC
2667	TGTGGACCTAGAAAATTGCCAGCC
2668	GAATAATCATCGCGGTCCTCATGG
2669	GGGATTGGCTCTTGGTTGGAAGAA
2670	ATTGTGCTTCCTCGAACTGGGAAA
2671	TGCCCCACCCCGTAAGTCAATAAT
2672	TCAGGACCGACGGTGCACTTAGTG
2673	CCAGCCGTCACAGTGCAATTTCCG
2674	CTTAAAGAGGCGCGAAGCACAACA
2675	TACCGCTCGTCGCGATCACAATGA
2676	CCGAGTGCGCGAAGTGTCTATGTG
2677	GCACCAGTGCCCGATCAAAACGTA
2678	TGCAGGCTTCTCAACGGCTGGGAG
2679	CTCCGTACGTATCCCGCGTGATAC
2680	GGAAGTGCAACTTAAAGCCCCGCC
2681	CGAACCGGCAGTCGATCGTTGCAT
2682	CCGTTAGTGGTCGACAGTTCGGTT
2683	TCAGGCTACGCCCTCAGCACTACA
2684	TATACGGGCCGAGGTCCGTATTCG
2685	CCAACGTGTGACGAAGGGCCATTG
2686	CTGCTCAGCGGTGCTTGAAAGACA
2687	GGAGATTGACTTCGCGTTTCACCA
2688	ATGGTTCAGAAGGTTCGTCGGGTT
2689	GAGTGGAGCATTCTCGGCCCTCAA
2690	TGGATTGGAACCAATCCCGCACAA
2691	TGCTCTTGTGGTCACTCGAGAGGA
2692	TTGGGAGCACGGTTACCGCCTGTG
2693	CAACGCGAGCTAACGGTAGTTTCG
2694	AACGCTGAGCGCTCACCTTCACCT
2695	CCGTCGTAGATCTGGAGGCTTCAA
2696	GGATGGCATGGGCACACTGTAACC
2697	TCGCTCGTAGATATCCTTCACGCC
2698	GGAGCAATACCGCGTCCAAAACAC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2699	CGGTGTGCTTCAAATGCCAAAGGA
2700	TTGTTCAGACTTAGGCGCTGCCCA
2701	CGGCGGTACTCTTTCCACTGTCCT
2702	AAGACGATTGCCCACGTGCCAGAG
2703	AGGTGAGCGCAGGCATATTGCAGT
2704	CTCGGGCCTGTACAGCAAAGCCGT
2705	TGCGCGCTAGTGCTGCCTATGATC
2706	CCATCCTTTGCCTTGAGGGTAAGG
2707	AACAACAGCGTAAGACGGACAGGG
2708	GAGGCGGTCGAGGCTCACAATATT
2709	CGAGGTTAGACGCCTATGACCCAC
2710	AACTTGCTATACCGGGCGCAGCAA
2711	CGCGGTGAATCGCATACACAGCGC
2712	CACCGAATCAAGCCATATGGCTCT
2713	TTCACAGCTATCCTAGGCGCTGCC
2714	AGAAGCGCGAAGTGTACCCCGCAT
2715	TGCATGGTATTTGCGTGCGATAGG
2716	GGCCGGACCTATGTGAGATGGAAA
2717	TCAACCTGAGTCCTGATCCCAAGC
2718	TGCTTACCGTTCAGGGAGGCGTGT
2719	GGAGAGTTACGCGATGAGCCACCT
2720	CGGTATGCGGTGTACAGCTTTCGT
2721	GTAAGCCGGGTCTCGTGTCGCCGT
2722	GCGTAGTGCGAACGCCCCGACCTA
2723	TCCTCGCGGCTTACGTCAAATTCG
2724	CGACGTTCAAAGCGGGAGAGGAGG
2725	CGAGGCACCCCGACATGTTGAGAT
2726	CTATTTCGTGCCGCGTCGGACAAG
2727	GGCTGCTCAGTGACGTGTCAACTG
2728	ATCACTCGTGCGTACCCGACCGTC
2729	CGAGATGTCCTATACCGTGGCGAA
2730	TCACACCGAGCCCCATAAATGAAA
2731	AGCTACGTGTCTCGAGCAAAAGCG
2732	TCAGGGCGAGTTTTTTCAGCGGCG
2733	TTCGTTCTGTCTATTTTTGCCCCG
2734	TGGTATGCCCAGGATCCAGCCTAC
2735	TCTCAGTCGTTAGGCCAATGGCGG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2736	AAAGATCACCGTGGAGCGATCGGC
2737	TAGCAGGACTTGCACTCGTGATGC
2738	TGCCCACGGTACCGTTCAAGGCTG
2739	TGAGGTGCGTCGCCCTAAGTAATG
2740	AGCAAGGGTTACAACCCGCAACCC
2741	CACAACAGCCAGTATTCGCCACAA
2742	GGCAACACCATACTCGACGAGCTC
2743	GGCTGGATTGACAATTTAGCCCCT
2744	CGTGAGAAATGCTACACGCGTCAG
2745	CGCATCTGCCCCATTTTGTTCCTT
2746	GTCGGCCTAGTCGGCAGAACGGTG
2747	TCGACACGCGTAGCAGCGTGGACA
2748	TCCCTCACCTTCCAAAAATGTGCT
2749	GGGCAAGAACATGAGAACAGACCG
2750	TCGTCCTGGTACGACTTGCGTAGA
2751	TGGCGGTTGCATGTGATGATCAAG
2752	CCTCGCGTGAGTAAAAACCGTCCG
2753	ACTTCCGCCACAGAATGCGGCCAG
2754	GTGTAGAGCTTGGGTAGCCCCGTT
2755	CGCAGCATCCGAGTTAACACACAT
2756	ATGAGCCTGGGATGATCCGCTGGT
2757	CCTGGCATAAGTGCCGACATGCTT
2758	GCGCATGAAAAACTACGACGGACG
2759	AAAGATGGGTCGATGGGAGCGTCT
2760	ATCCTGGGCACGAGCGGATTTATC
2761	TCACCGCATTTGATAGTTACGCGA
2762	TGGTGGAGCGGACTCTGGTGTTAT
2763	CACAATGAAAAAACAATGGCCCCA
2764	CCTTGCCGCGCTTGTGGTACCAAC
2765	CCGAGACCTTTGCCACACGAAAGA
2766	ACCGCGGTGTACACCTGAGCAGGC
2767	GTCGTACGCTTACCGCAGCGGAGA
2768	TCGTAATTTGACCGACACACGCAG
2769	CCTAGACGGATACCCTGAGCGGAA
2770	AAGCGACAGCAGAGGTTCAGTCGC
2771	GCGTGGACGATATCACCTGGGCGT
2772	GTCGGAGAGCCAGTGGTACGGCTT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2773	TACCCTCCGGACCAGCTGTAATGA
2774	TATCCGCACGGTATAGCAGTTGCA
2775	CATCAGTCGGGCTACCTTCAGCCT
2776	CGGATTAATGCCTTTCCTCGGAAT
2777	TTCGTCGTGCCAAGCTAATGCAAG
2778	CCACTACGGATCAGCACAGGTGTC
2779	GGCCGAGACCACCAGTAACAGGTT
2780	CGCGCGGAAGCATTGAAGTTACTA
2781	TCGGCTTACCGCTTCGTCTGACTT
2782	GACTGACGTCAAGGCAAGCAACAC
2783	AGAGGAAGGAGGGGCTGTGACAGA
2784	TTCCAATGCGAGAGATGGCAGGCT
2785	AAATGGGGTGCTTCGAATATGTCG
2786	GCTGTCGGATTATTGCACGCCTGT
2787	CCGACTTTGTTTATGTTGCTGGCG
2788	GCTGCGATATAACCCGTCCCAGAA
2789	TGAGCTGGGCGTCAACTCCGAAGA
2790	CCCAAGCATCCTAAATCTCCCTCG
2791	CGACAGCAATCCACATGCATTCTT
2792	TGAATGGTCGGGAAACCAATGCAT
2793	CTTTGCATCGAGATGCGGGGTAGC
2794	TCCATTTCCTCCGCAACTCTCAGG
2795	CCACTACGCCATCCTGACAACGAG
2796	TAGTAAGGCCAATGTACGCCGTCC
2797	GTCATGCATATGGGGCCTGTTTTC
2798	ACCGGTAGACGTTAGCGGGTTCAA
2799	TTGGTTCAAACGGCCACACGTCTC
2800	GACACAAACTGCAAGGGAGGCATG
2801	CTCGAGCGCTGTCATCATATCGGC
2802	GCGGCTAAGGCACAAGTAGACGTG
2803	ACAGCCTAAATGGCGCAAGACCGA
2804	GCCAAATGCTTGGAATTTGCTTCG
2805	CCGATGATGTAAGCCGTCGGCCCT
2806	AGGAGCAAACAAACGCCAGTGACA
2807	ACGAATTGGGTAGCCGGACTGAGA
2808	CTGTTCCAGTTCGGCAAGTGCGGC
2809	AGACAAGTCAGGAACGCGTTTCCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2810	AGACGACGGCCAGATACGCTGCCA
2811	AGGAAGCGCTTCTTCCGGTTCTTC
2812	GATGGACGCAAACACAAGGCGATC
2813	CGCATAGCAGTCTCCGCATCTTGG
2814	TGGTTCCGGTGTGCAACAGATAAA
2815	CCGTATGCCACCTCCAGAACTCAA
2816	GTAAAGGAACCCCTCGGGAATCCT
2817	GCCTGATGCTCGTTAAAATTGCGT
2818	TCGCACTTGGACCATGAGATCTGA
2819	TTCTCAGGCTGGGCAAGAGTCTGT
2820	CGGACCTGGGGATGCTGGGATTAC
2821	TCGAGCCGATAGGGTTGGCATTGC
2822	TACGTGTGTCCCACACACGTCGTA
2823	TGTGAAATTCGCGTTTCGCATCTT
2824	TTGCAATGCTCCAAAAAAACTGCC
2825	TCTCATCATGGCTGTGGCTTTGAC
2826	ATTACACCGCTTGGTTTGGAGTGG
2827	GCCGTGCAATGCACAGAGTTCAAG
2828	GAGATCAGACCGTGTCGGATGCTG
2829	CCACCTATCTTGATGCGACCTGGA
2830	CCGATCGCCGTTTATGTCTACGGC
2831	GAAAATCACGGTAAGGCACGTTCG
2832	GATTCTCGCTTCCCAACGAGCATA
2833	CCAGAGCAGCATTCCACAATGGTG
2834	TGTGAAATGTGGCAGTCTCAGGGA
2835	CGATCCTGCGTGCCTCATCCAGGC
2836	CCCTCAAGTGGGCGAGGGTTTTCA
2837	TCGCCTCCGCCTCGTGTGTAGAAG
2838	TTCGCTTTCAGCTCATTGGAACGA
2839	TGTAATCTGAACAAGCGGACCCCT
2840	TGGAATCTTTCTTGAGCGCCGTGA
2841	GGCTTTCATCTTTAACCGCTCGGT
2842	TGATCCGAGCCATTCCTAATCACC
2843	TGGTAGGCGTGATGTCCTACGCAA
2844	AGGCATCGGTAAGAAGGCCCTATG
2845	CGCCGCGAGACGATCCTTATTATT
2846	ACATGGACGAAATTACGCCCGTCA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2847	ACAGAAAGGTGGGGAGCCTAGCGT
2848	AGGCTTGCGAACATGGGTAGTGAC
2849	GCGTGGGCCTTGCTCCTGTTTAAC
2850	GAATACAGAGCGTCCGATGTGCCC
2851	GCGACTCTGTAGGGAGCGCGATAT
2852	GGTGCACTCATATGCGTCGCATCG
2853	CTGTCCCACGGGGAAACCTTACTT
2854	TGGCTTACTGTCGCAATCTAGGCC
2855	GCACTCAGTTTCCGGTATCCCATG
2856	GTGAGGTTCACGTAAGGCACAGCG
2857	GTAACGCCTTTGTCCCCAGCGTAT
2858	GCATTGATATGGTCGGTCTCGCCT
2859	GTGGGTTTAAGTGACAACGGACGC
2860	CAAAACCCTGCCGAAGATGTTGGT
2861	TCCGAGGAGACTGAACCTGCTACC
2862	CGGGGAAGAACGGATTCGCTAAAT
2863	TGGTTAGCTTATGTCGGAGCCACC
2864	ACGCGTCGATGAACTAAGGCTCGC
2865	TTCTCCTGACGAGTACGCAGTGGG
2866	TCCGCGGTTGCCGGTTTGTTAGGA
2867	TGGCGCATCTTTCAGGGGATGATG
2868	TCTTTGGTCCTTGGTGTTTACGCG
2869	GAGAACTCCCGCTACAAAGGAGCC
2870	TTAACGTGGGAACCGTTGGTGAAT
2871	GGGACACCATCCTTGGGTTTGTTA
2872	CAACAAACCGCCTTGGGAAGTGAC
2873	TTGAAGGCCACCGATACTGATCGC
2874	TCGTAATAGAACTGCGCCCAATGC
2875	GGCACGTTGCCCAAGTTGGATCCA
2876	ACATAGCTTGGCCGGACACCCACC
2877	CTTGCCGCCTTGCGAGTGGCTAAA
2878	AGTTCCGCGTCCTACTTCAACGCT
2879	AATGGCTCGCCAGATACCGCAGCC
2880	CAAAAGGCGTGTCCGAACTTTTCA
2881	CGTCCACTTAGGTGGAGATACGCC
2882	GAGCCTCTTCGTCCTGAAGACCGA
2883	AACATCAAGCGGCAATCTCCCTTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2884	CGTCCTGACATTATTAGCGCGTGC
2885	TGTGCAGACCCTAACGACCTACGG
2886	TTAGGTCGGCCTAGACCCTCCGTA
2887	TCACATCGCTTAACTGAGCGCATT
2888	AGACCTTCCCACGCGAGATGCTAC
2889	TTCTTGCCAAAATGTGTCCAACCA
2890	CAGTTTTCATTGCAGCGAAAGCAA
2891	GTGCCGATCCCGAGACAAGTTCCG
2892	CATCCGGCCTCAGTGATTCTTACC
2893	TGCTGGAAGCCACAAACGTTACGT
2894	GAACGGCCAGGGGACAACTATCGT
2895	TCATCTAGGTCGAAGCGCAAGACA
2896	TTTGGTTACCAGCACCCATGTTCC
2897	GACAACAGTCTGTCCGCCACATCC
2898	GCCAACAGGAGATGCTTGCACCAT
2899	CTAAGGACGCATTGACCCCTGAAC
2900	GGTCGCGTAGTGAGTCAGAGGCGT
2901	TTACCTCATGAACCCTTCGCGGCG
2902	TATACAGCATCGTCGCCGGGCATA
2903	GCTTAGTGGCGTCTTCGTCGTAGG
2904	TGCACTCCGCAACCTTGTGAAATC
2905	AACCCGTCATGCCGACTCCATCTA
2906	AGCACTAGTGGCGTGCGACTTTGC
2907	TAAAAAGTGCCGCTAACCACGGAG
2908	CGCGGAATATTTGTCGTCCGATTC
2909	TTCTGCTATGCGTATGGGGGCCCG
2910	CGAACTACTGCGTCAGCCTCTCCC
2911	AGATGACGAATTAGCGGGGTTGGG
2912	AATAACAGTGGCAATGAGCGGGAA
2913	ATATGTTGATTCCCGTGCTGCACA
2914	AGAGTGGGCACCACCAGGCAGACA
2915	AGGCCTGGGTTTCTGCGTCTTAGT
2916	ATGACTTCAGGCACCTCAGCACCT
2917	CGGACGTGACAAACGGACATACCC
2918	CAAGTGTTTCGGCCCAACTCTCGA
2919	GAACCCTTATCGGGATAGGCCCAA
2920	CAGGACGATACCAAGCAGAACGCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2921	GCGTCTTGTGATTCTGCCCTAACC
2922	AAACAACCATCAATGTCGGGTCCA
2923	TGTAAAGACCAGTTGGCGGCTCTC
2924	GCGTTTTGACTCGGTGGTCAGTCC
2925	TGTATGGAGGCACGGCAAAGTCTT
2926	TTACCTAGGTTCCCGCTGACACGC
2927	CGGCTCGTGGGAATCCTCTGAAGA
2928	CCGGCTCGGGCATTTCTTGGACCT
2929	CAACGATGGAATTGTCTCCTTGGG
2930	CGGGCTATTATCGGGATTATGGGG
2931	ACGTACCTGAAGATGCAACGGCGG
2932	CATGGTGCAGCACGCACAAGTAAC
2933	CGTCGATATGTCGGGCTATTGCCT
2934	AAATGCAGGGTTAAGAGGAGGCCC
2935	TGCAAGGACTGATTCTCCCGCTGT
2936	GTTTTCGGAACGCCGCAGAGTTCA
2937	CCCTCGATGGTTCATTGGGAAGAC
2938	CCTGTTCGCTCATAATGGTGGGGT
2939	GAAAGAACGATCGCGGAATAGCTG
2940	TCCACCTGTGTGCCTTTATCCTCA
2941	TCCTCCGTGAACCGCTGTAGCGCA
2942	GCCCCAGAGAGTCCCTGCTCCCTA
2943	TTGAGATTTTTACGGTTTCCCCGC
2944	CGATAGGACGTGGGCATGTCCCAG
2945	CCCGAACTTTGAGATCCGAGAACA
2946	TCACGCAGCTAGAGTCGCGTTACC
2947	AGATAACGCCCACTGACGACATGC
2948	ACGCTTAGAGCTCCGATGCCGAAT
2949	GGGCGATAACTTAAATTGTGCCGC
2950	AGGACGTTCATGCGTCTCTTTGCA
2951	CGGCTGGTAGAACTGTGCATCGTA
2952	TTCGAAATGTACTTCCCACGCGGA
2953	GCAGGTTGGCTGTCTTGTGGAGTC
2954	CGTTTGGTTGCTTCAAGAACCGGT
2955	CATACTTGGTTGTTGTGCCCACGC
2956	GGGGTCGGCTGAAGTGTTTTATCC
2957	GTGACGGTTGATTAACGACCGTGG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2958	CTTATGGCAGCGCCAGGGGCACTC
2959	GTTAGGGGACCCACCTCGTTTGAT
2960	CAATATAAATGCCGCGCATCGAGT
2961	TTCTTCATCAGCAGTCCCCGAGAA
2962	AGTTGCGTCCCTTGATGGCATTTT
2963	CCGACTTTCGTCCACGATTCCTCT
2964	ACTTGGCCGGACGACAGCAAAGAC
2965	CACCGCGGTAGATGTATCCCTTCC
2966	GTTAGCTTTAGCTCGGCACGCCTG
2967	GCGCATAAGAAGGTCCGCTAAAGC
2968	ACATCATCACGCCTGGCGTGACCA
2969	CCGGCGAAGTTTGGTGTGATTAGA
2970	TGGGAAGGCAACATGAAAGTCCTT
2971	TGCACCGCCAGATTGTGCTGAGTC
2972	ACATGTGAAGTGAGTGCCGTCCAA
2973	CCTCTGGAGGGGATTAGCCACGCT
2974	CAATAGCCATGTCACTGGCAACGG
2975	ACCCATGGTTCCAACGTTCTTTCG
2976	AATCTGGTCTTGGCATCCTCCAAA
2977	GTATACCGGTGCATGCTGAAGCAA
2978	AGTGTTCTGGTTCGAGTCGACCCG
2979	CGGGTATTCGACACACACGAGGAC
2980	AGTGCAACAGAGCGCTTGGTCACG
2981	TGCACCTATAGTTTGGTGCCGGTG
2982	TGCTCACGTACCAGGACACTCGAG
2983	AGTCCACACCTCGAACGACAGGCG
2984	CGCCGACCTGGTCAAAGAGCGCTA
2985	GCCTAAGGGCCTGTCGTTTTCCGA
2986	TGTGCGTGCTTATGTTCCGGTCTC
2987	CAACCGTTGGCCGTAACAAAAATC
2988	CGAGAATCAAGGCGTACCATCTCG
2989	GCGTAGGCAGCCTCCAGGGAATGG
2990	GATGGTGTTTTCGCCAAGACCAAT
2991	CAAGCTAGGGACAGAATTGCCCAC
2992	TAAATAGGCGAAACCGTTCGTGGC
2993	TCAAGACCCGCAATGTGTTCATGT
2994	GCGGCTGGTAGACTCTTTGCACAA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
2995	CAGGCGTAAACCTGAACCAAACGG
2996	GCCGATCTGTGCTGAGGTTCATCA
2997	GATATCGCGTCGCAATATCACGCG
2998	CCCTGCACGATTAAGCCACCTGTA
2999	TGACATACAGATTTGTGTGGCCCC
3000	GTTTGCGGCCGGTATTCACGATGT
3001	TTTTACCTGGCCATTGGTGAGCTC
3002	CTCTACTCAATCAGGGTGGGAGCG
3003	GGGTTGGAGGGAGTCTTGACCATT
3004	CGAGGTCGGTAAGGAAAAGCTTGC
3005	CTTTACGCAGGCACCTCCGAGCTG
3006	CATTGTATGGCCACGTGATTGACG
3007	GTACGGTGCGAGAGCGCCTAAGCG
3008	TTCCATATGCCGAAATGGACACAA
3009	TACGCCTTCCGCTATAGCTCGTGA
3010	CTGGCCGCTCGGCTAGCCATCAAT
3011	CTGTACGCCACGCATGAAGGGTGA
3012	CTTACGCGTCCAATGACTGCCACC
3013	CACATGGTAGAACTCGATCGGCAG
3014	CGCACCGGAAACTAGTGGATGTGT
3015	ACTATGGCAACCGACACTTGGTCC
3016	CTAGTTTGCGCTACCCACCTGCAA
3017	TAGTATCGCCCGACAATAGCCTGG
3018	CCAATATTTACGGCCTGATCAGCG
3019	ATGGCTATCCCTTACTGGCTCGCC
3020	CAAAACTTGGCAGGCTTGGGACTT
3021	AATGACCGAGGCTGCAAGATTGAC
3022	ATCATCTTTCGCCACCAGACATGG
3023	CGTTATTACCGATGCACACGTTGC
3024	CACACTGGCAATCGCCTCCCTCGT
3025	AGGTTGGTAGGAAATCGGAGCGCT
3026	GCTGAACCACTGTGGTCAAGATGC
3027	CGTTGAGTACGACACGGTCGAGGT
3028	TTTTTCCGCCGCAATGTGATCTAA
3029	ACAATACCTCGACCGCTCAGCATC
3030	AGTATCCCTGCTGGCATACACGGG
3031	TCTTGGGCTCGGTAGTTCAGCACT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3032	CCCTATATCGAGCCCATAGGGCGA
3033	CACGAGTGGCATCAACGGCCTACT
3034	TGCAGGGTCCGATGTGTTCAAGTA
3035	GCTTGACCGCTGCTAACCTCGTAC
3036	TTTTGCATCTCTCCACCATCCAGA
3037	AGAATGTGCACCGGCTTCCATCTT
3038	TGTTATGACCCGCTCTGTGGCGTG
3039	GGAGCTCCTGTTTCATCGAGGCTA
3040	CATTTTGCTGTTTGGGGGTCCCAT
3041	CCCGCTCCTTCACGTGAGACGAGA
3042	GCGCTCAAGTCGATTGCCACAACC
3043	CGGTTGACGGAGACCGCAGTACTT
3044	ACTCAAGACCGGTGCACCTCCAGC
3045	TGGATGTCGAGCGTGTCTGAGTTT
3046	TTTCGTGTGCATGCAAGTAATGGC
3047	GCGGCGTTAGCTCGAGCTAACAAA
3048	GGGTATCCTGCCCGAGCAGTAATT
3049	GGCTCCGAATCTCTTGTCCGGTCT
3050	AGGATGGCCACGCCGAATCAAAGT
3051	GTGCGGGGACGTTTACATAACGAG
3052	ACTTTTGACCTGAGGCCGCTTGCA
3053	ACTCCGCTTCAATGGAGACCGTTG
3054	GATCGGAATTCGCCGCCATATTGA
3055	ATGCGTGCCCATGGAATGACTTTT
3056	CCGCATCGCACGAAGGCAGGTCAT
3057	CACCCTATGCGTCTCCAATTCCTG
3058	TGATATGCATCGCTGAGCCTCTGT
3059	AGCTTCACACGCTCACTGAACCTG
3060	AACCCGGAACCTCCTCTCACTCGG
3061	CTCGTCAAACTTGGCCGAGGAGTC
3062	GTAGCTGGCAACAGGCAATCAGGA
3063	CTTGTCACGAATATTCGCCAAGCG
3064	CAGTATCTGAAACACGGGGTGCTG
3065	GGCTAAAATGGGCGCCCACGTGTA
3066	ATGAGAGCCAAGCGCCTCAACTCC
3067	TATTGTTAGGCACCGCTTCGCGCT
3068	GGAACTAGATTGCCAGTGCTCGCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3069	AGTCGACCCCAAGGCAACTGGGTC
3070	GGTACTGTTAGCTCGACGATGGCC
3071	CCGCAATACTTGACGGTAACAGGG
3072	AATTCCGGGTTTGAACGGTTGGAA
3073	GACACGCAATCGGGTCTATGCGAA
3074	GATTTTGGCGTCTCATTGCGTGAT
3075	TGCCATAGGGAGGAAACGCAATTA
3076	GAGGTGCCCATGTTAGTGGTGTCC
3077	GCTTTAGCGGTCATACGACCACCA
3078	CCGCTACCAACAATCCGATTAACG
3079	CATAGTGGGCTGAAACCCCAGGAA
3080	GAGGATCTGGCCACATCGAGAAAG
3081	CTCGTTTGGTACCACGTTTTGCCG
3082	AATACACGCGGCGTAAACAGACGA
3083	TGTCATGGGCCAAATGACAGTGGC
3084	ACAGCACTTCCGACCCGTGTACGA
3085	CTCCGTAAAGAGCACAGCTTTGCC
3086	ACGAACAGGTAGGGATCGGTCCTC
3087	TGGATCCACCTTACCGCGCCATCG
3088	AGTATCAAATAGCGGCGCGGCAAG
3089	GAATTACATTGTGGATGGAGGCGG
3090	CTCCTCGGGGAGTCGAGGAGTACG
3091	AGTGTCGAGCCAACTCCCACCAAT
3092	AAATGACATCCGTTTGGCCACAGC
3093	CGAATCATATCGCCATCGAACTGG
3094	TATAATGCACTCGCTTGGTGCGCA
3095	GCCAAGCAGATGGTAATTATGGCG
3096	CACGCGGGAAGAGCACGTAGAACT
3097	TACCCGAGAATTTGGAGAACAGCG
3098	TGACGGCAAACTGTGGCATCTATC
3099	CACAGTGTTCCAGCCCTTGACGAT
3100	TACCCGCCCACACATGAAAGTTGG
3101	TGGCATATTTAAGATTCGGCGACG
3102	ACTGAAAAAAGAACGGGTAGCGGG
3103	TCTGACCGCAATAGGTGGTCATTG
3104	ACTTTTTGGCGGGCCCTCTCTCGT
3105	CTGCCCAGATCATTGCGCGATCCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3106	CGGAGGTTAAATGCTTTAACCGGC
3107	AGGCGTCTCCAAACGTCCTTCTGT
3108	AGATGCTATCCTGAGTGGGCCTGC
3109	ACAGGGTGAAGAGACCGTGGGATG
3110	GACTGTCTAACGGACGACACGACG
3111	AGCTGTTAGGACCCGACAACCGGT
3112	TTGCGTAGTGTGGGCATTTCCTCT
3113	ATGCGCGCTTCTTTCCTTGATGTA
3114	TTAAGGGCGTCCGCGTCTATTCAG
3115	ACCTTTAAACTTGTACCGCGGCCC
3116	AGGGATGCAGAGGCACCACATGTT
3117	CGGTTCGACGTATGAGCATCCGCA
3118	CAGGGCGATAGTCACATGGAGGTT
3119	GCTTGACTGCCCCGTTTCATATGT
3120	CGAAGGGGTTGTGCAATTACCCGA
3121	AAAACGCACCGCAATGACAAAATT
3122	ATTCCTGGACAAGACCCTCAACCG
3123	CCTACCTGCCTGCTAGCGGTGAGG
3124	GCTCGTAAATGGGGAGGAATTGGA
3125	ACATGAAAACAGGCTCAATTGGGG
3126	GTTCCGCACATGGATTGAGGTCTC
3127	GGCACCCAATACCACGAAGAAGAA
3128	AGGGGCATTTCGAACTCCATCTTT
3129	CATCATCACAAAGGAACGTCGGTG
3130	TAAAGACCCACCGTCAGCAGCAGC
3131	CCCCAGGCGTAATGCACCACATAG
3132	GCAGGTCGAACGCTAGTGGTTGAA
3133	GGAACTTAGGAGTTCACGTCGCCA
3134	GCAGATACGGCTAGCTGAGGTGGC
3135	CACAGGCCTAGAGCCTCGGCGTTC
3136	GTTTTGCGCGCATGAGGTTCATTA
3137	TTGCGCCTGATGCCAGCAGTACTA
3138	GATATCAGGCTTTCCCACTGCCGC
3139	TGCGCGGAGACGGAGATCTATGAA
3140	CATTGGTGTTGGCTGAGAGTGGAC
3141	GTCGGCACTTGGGCACCATTAATA
3142	ATCGATCGGTGTCTCACCACGGAG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3143	CGTAGCCTTCCACCGTGTCGATAG
3144	CGCTCTCCGTCTGAGGAAAAGGGG
3145	TCGCCCCAGCCAAGGATATATTGC
3146	TCTCTTGCAAGGAACTCTGCCGTC
3147	GTCCTGGACAGACGGAGGGTGTTA
3148	GCCAAATTAAGCGGGCTCGTAATC
3149	CCATTTGTTGACCGATGGGAGGGG
3150	TGGTCAAAAGAGCACGATCCAGGA
3151	CGCTACTAAGACGCCCCTGTCCAC
3152	CATACCTCCCGCTTGGATTCACTG
3153	CCGCGGAAGGAATGTCATCTACAA
3154	CACGGGACATTCATTCACAGGACG
3155	ACTAGTGAGGCGTGAGGCGGGCGT
3156	AGGAGTCACCCACTCCGCACAAAA
3157	TCATGACAGCGCACCCCATACCAT
3158	GGTAGGGGACTATCGATCGTGCTG
3159	ATGTCTCACTACCGCACGTAGCGG
3160	TACTGCTCCGGTCTTCCGCAGCTT
3161	ACGGAGGAGCGACTCGTTCGCTGC
3162	GAAGTCTGTCGCCGGTGGACGGAC
3163	CCGTAACGTGTATTCGGACGAGCG
3164	CGTGGAAGCGACTTAACCAATCGT
3165	GGCATGGGCTATGCCTCACACTAG
3166	GGGTCGTATTTCAGCATCGTTCGT
3167	AATGGTCGCGCAAACCGTAAGAAT
3168	CTGGATTCGGTACGTCCAACGTTT
3169	CGCAAAAACACCCGTAGCCAAGAA
3170	TATGGATACGCTTTTGGACTGGGC
3171	GCTTCAAACGCGCTTCACGCTGGT
3172	TACAGCCCGCTCTACCTCGCCACC
3173	TCAACCGATGTCAAAATGCACGTT
3174	AGCTCTCTCCGAAGTAGGGCGGTA
3175	ACGCACACATGGAGACTTGGCTCC
3176	TTCTTGAAAGCTAGTGGGGCGCTA
3177	CAATCACGGCTGGGCTATTCTGTG
3178	GTGGCGACCCGTCGGTGAAAGAGT
3179	CGTCGAATGCCGAACCAGTTAAGT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3180	TGCGTATTTGCATGCTCACAGCTG
3181	CGCAGTTGGTTTGTGCACGGCTGC
3182	GTTTTTCCGTGAAAACTGGCATCG
3183	ACAGGTTCCTCCACCACGATTTGA
3184	CTAGCGCGCTTTTAGGTCCTTGCG
3185	CAAAATCAAAGGGATCAACCGGTG
3186	AACGTAACCCCAGTGAGTCAGGCA
3187	TCAACCGGTGCACTTTAGAACGCC
3188	ATCGCAAAGTTGCAGGCGAATACT
3189	ATATGTCCCTGGGTGCTGCACAAC
3190	TGGCACTTTGTAGTGCTGCGGTGG
3191	ACGCACGACGTCCTTCTAAGCTCG
3192	CCCACGTGCACTATAGGGATTTCG
3193	CCGCGCTTGGTCAGTCATCCTTGC
3194	AGCGGCTCAGGGAATAACAACAGG
3195	ACAACGCGATCGGAGGCAACCAGT
3196	AGCAATTGCCTCCGTAGAAACCCA
3197	GAGTCGTGGCATCGCCTGCTATCG
3198	TCTATGCAAATACTGCGCTTGCGA
3199	TCAGCTTAAGTTACGGTGTGGCCG
3200	TCCAAGGTCGAACAGGGATCAGAA
3201	GTTAGGCTGGCGTCAATAGCGCTT
3202	GGTGTCATAAGGAAGAGGGCATCG
3203	CCGGCGGGCTAGATCAATATTTCT
3204	CTAACGTCAAGTTTTACGCCCCGA
3205	GCAGCACAGTTTTCCGATTTGCGG
3206	CGCACGCAAGGGGAGGGATGACTG
3207	CGGGGCCGAAAAGGACGTCACAAG
3208	TTCTCCAACACGGCTAACCGGTAG
3209	TTACAGCCTGGCCCGAGGTAGTTG
3210	TTTCGGGCAGCATGAGTTATCGAA
3211	CTACTGGACGCCCTGCTTCGAAGT
3212	GGTCGTCCGACGTGAAAAGACCAA
3213	GTTTTCGAGCTCTTTCTCCGCAGG
3214	GCGTGAAGGTACCCAGTGTCACAG
3215	TTTCTGAACGCTTCGACGCAACAC
3216	TGCTAATAAGCACGCCTAGCCCGT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3217	AAATTAATTGTGGTGGCTCCGGCG
3218	TTACAATCCTCGGGCTCACTGACA
3219	GCTGAAGGACAAGGCGTGGGCAAC
3220	GGGATAGGAGACCCTCGCAATGGT
3221	TTGCAGTACGTCCTTGCGCATGAA
3222	TTGATCACTGGATTGGGTGCGAAC
3223	TCTGCAGACGTTGCGAGAGATGAT
3224	AGTCTAGCAGGGATCGAAGCGGAT
3225	GGGGTCCCGCAACAACTAATGAAG
3226	CAACCTCTTATGTGGTGTGCGCGA
3227	CTCGCTGGGTTGCTGGAGTAGCAC
3228	CGTTGTATTGTGCAACGCGAAGTT
3229	GGGCTCAAAGTGCCTGAGTCGAAA
3230	CTGCTGTGCCCTCTCAGTGAGAGC
3231	CGGACGTACTGTTCGGAGTCCTCA
3232	GTATACCACCATACCGGGACCGCA
3233	CTGCTGCGAAGGGAGACACGTCCG
3234	AAAGAACGTGGAGGATCCATTGGG
3235	TCGATTGGCTGATCTCCAGCCTAC
3236	CTGCGAATTCGAAGGTTGTTACGG
3237	GCAGGAGGGTCAGGAGTACGTGAG
3238	ACCAACGGAAGGGAACTTAAGGGC
3239	ATGATGGAGGCTGCGTTTTGGTCG
3240	AAGCCCAATTTACCGCTCCGAATA
3241	CTAGGCTGTGCGGGACTAGAGGTG
3242	TGCCATCTGACCTGGTGATTGCGT
3243	GTCGTCAACTTTTATCGCGCACCT
3244	TTGAATGTAGGCTGCTGCAAGCGC
3245	CACCTATCGTGGCCTCTGTCCCAG
3246	GGAGCGCCCAGTATAATGAACGTG
3247	AATGGGGGTTCTTAGGGTGCCGTA
3248	GCCATGAGGAAAAGCACTGGGTCT
3249	TCCGGGTCGTACTGTGTATGATCG
3250	GGAGGTTATGTGCTGCTGATGACG
3251	CTTCAGCCGTGAATGGTGTGAAAG
3252	CTTCAAGGGCTTCGTCTGCTCGTG
3253	TCAGGGGTCACGCATTGGGTTTCA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3254	ACGGTCCTCGCATAATGGACCACT
3255	AGGCGTAAACGCCGGTCATAGTCT
3256	GATCTGGTCGGAAAACAGGAGCGC
3257	CCCATCGATGTTATTTCCGACGCA
3258	TGTTTCTCCGCATCAGTACCGCAT
3259	CGGACCCGGATCGACAAGTAGTCA
3260	AGCCAGAGCATGAACTGGAGCGTC
3261	TGGAGTTTACATCGGAACGCAGGG
3262	TCGACCACCGGTACGATACAATCA
3263	GCTTGTGGAATTCCGACGGTTCCA
3264	CACATCCACCCTACTGAGGCACAA
3265	GCCGGATGAATCTGCCTCGCTACA
3266	GGTTGCAATTACGCCGGGATTAAA
3267	ATTTCCTCGCAAATCGTCTGGGTG
3268	GCTCCTACGCCATGTGCACGTTTA
3269	AGGGTTGTCGAAACATGGGGGTGA
3270	ACGCGACCTGCTGTCAGCGTGGTG
3271	CGCCTAACTAGGGGAGTGAACGGA
3272	GTTGACCTCCGGATTTGCTCACGA
3273	TACCTCCGTCATTCACTCTTCCCG
3274	GGCGTTCCACATGTAATTGGGTCT
3275	CGCATCACGATCGTTAGGAGGGAG
3276	GGGCATTAAGCACGCACTTCGTCA
3277	TTTCCATAATTCGACACCACGCGG
3278	GACCATGAGATGCTTTTCTTGCGC
3279	CGCGGTCGTCCTCAGAGAATGTTG
3280	TGCTGTGACGATGGCTCCTACCCG
3281	GGCGAATGCTTCTTCGCATCAAGT
3282	AAATGCACAGCGGAACTGACCACA
3283	TATCGACCTGGAACACGATCGGTT
3284	CATTGAAGTCATGAAGCCTGGTGG
3285	CTTTCAACCGTAGTGGCTTGGGCA
3286	CCGGTAAGGTCGAATTGGAGCCTA
3287	GGATTGAAAAATCGCCGGAAGATC
3288	TGAAATTGTGAGGGAGCCTTAGCG
3289	AGCGGGATCCCAGAGTTTCGAAAA
3290	CGAGTGTCACTGGTCGGTTGCTCA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3291	GCAGCATCCGTTCCCCTATAGTGG
3292	GTATTCCTGACCGGCTGAGTGTCG
3293	GCAGCGTATGGGGTTAGCCAATGA
3294	CGCCCTGGTGGAGTTGTATGATGA
3295	AGGTAGACTGCCCGCGGCAGAGCA
3296	ATGCGTGAGGAACTGACTTCGGAC
3297	ACGGGAGAGGACATGCATTTTCAA
3298	ATTCATGCAGGAAGTCCGAGGGAA
3299	AGCTCTCTCCGAAGTAGGGCGGTA
3300	TGGCCCACATGATTGGAGCTCCAA
3301	GCCCTTTGCTTGCATTGATTGATC
3302	AGGAGATTCTTCGGCTCATCTCGC
3303	GCAGCTCCGCCAACGAACTTATAG
3304	TGGGTCAGCTTCGGCCAGGCTGAT
3305	ACGCTCAGCGTGCGCTAGATACGA
3306	GCAACGAGAGCGAACGGTTAACTC
3307	GAACACAAACAGAGGTCGTCAGCG
3308	CGTGCGTTAGCGTCGGCGTATGTT
3309	GTGCTAGCCGAAAGTAGCGTGCGA
3310	CGCGGAGGTTTGCAAGTTGTTAAC
3311	TACTGCCCGGCCTGAAATGACTTA
3312	CATGCGCACATGAGGGTCACCTTT
3313	CTCGGGTTCTGAAAGCGATGCTTC
3314	GGCACACAACGAAGGCTGATGATA
3315	GGAGGCCGAGTAACCTTGAGGGTC
3316	ATTCCTATCGCGCGTGCTTCTAGC
3317	TTGCCGGTGTGTTCGTGAGCTGTT
3318	TTATGGGAATCTACAAAGGGCCGG
3319	GGGTGATCCAAAATCCACGGAGGC
3320	GCGAGATGAGCAAATTGTATCCCG
3321	CCTGCACACATCATGTCTCAATGC
3322	GGCAGCGTAGGGATTTCCTAGGGG
3323	AGAGATTGCTCCTATGTCGGCAGC
3324	CCAATACCCTGGTGACCACTCCAA
3325	GACGTCTGTTATGTCGTCGCAAGG
3326	CCACAACGTCGAAATGACCTACCA
3327	CTTGGTGGCATGCATGCCTTGCCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3328	TACGTTCGCCCGACGTGGAATAAA
3329	GGAAGAGAAAACCGACAGTCGCGA
3330	GACGAACAAGAATTTGGGGCAACC
3331	CGTGCCCGCGAGTTCATGGTGCTA
3332	AAGAGAAACCCTTTCCGGAGCTCA
3333	TTTTAAATCTGCCGCCCTTCCATG
3334	TCTGAAGCAATTTGGCCTCCTCAA
3335	GATGCGCAAGAGGGTATTATGGGC
3336	GTGAAAATCTCGCAACTTCCTGGC
3337	ACGGGAAGCGGTGAATTGTTGGTA
3338	GCCCTACTATTGCCTTGGCAATGA
3339	GTAAATGGCAGGAAGCGGCTCTCG
3340	AGGTGCCAAATAGTGGACTGCGGT
3341	TCGGATGGTAGGAGGCGAGATCGG
3342	GAGGTGAAGGAACAGCGACGCTAA
3343	ACCGTCGTTACCGCTCTGGTGTCG
3344	TTCCAATGTCCGACATGCTATGCC
3345	CGGCTTTATAGGTCCAACATGGCG
3346	CCGGCCTGGAAAGCAGAGTTATTG
3347	TTTATCGTTCAACGCTCACGTCCC
3348	AGACCCGCTGAACGGAGCTVGGAT
3349	ATCCATCAGGAGAAAGCTGGCTCA
3350	TTGCCAATGCGTAAATCGGTTCTC
3351	GCTTGGCAGAAGGCGTACACTAGG
3352	AGGCTCCAATGCTTTAGCCGCAAA
3353	GATACTAGGAGCGAGCCCCTTTGG
3354	GTCGTGTGCAGCCGCATATGGAGG
3355	TACCCCTGTTGCGGATAGATGTCG
3356	TAGGGTAACAGAATGAGGGGCGCT
3357	ATCGTGTCGGGGATCGAATTTGAG
3358	ATCTCTCGTGCGGTCTTGCAGAAG
3359	AGAAGCCACATGTTAGTGCGGGAG
3360	ATCTGCGTTAACTGTCCCGACTGG
3361	CGCTCACAACGAGCTTACTCATGG
3362	TCTACGCTACGATCCGTTGCATCA
3363	TTTAACACCGAAATGGGAGCGTCC
3364	ACAGGGCGTAGTAGGCCGCTTTCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3365	GTCGACCGTGTTTGTGGGGGATAT
3366	AGAAGACCTTGGCAATCCGAGTCA
3367	TTGGGTGCTTAAAATGCGGTCTGA
3368	AGCGAAGTCGTATTGACGTGCGGT
3369	ACTTTCAGCTCCCAGTAGCACGCA
3370	GCGCATGGTGAGTCCGTATTGCCG
3371	GGGTCGTGTCAGAGGACAAACACC
3372	ACAAGAGGACCTCCGGGTGAAAAT
3373	TAGCGGGGACCTATCCGCCTCAGT
3374	GCTCTATGCCATGTCCGTGGATTC
3375	AGCTCATAATGCGCGTTGACCCCG
3376	ACAGTGGAAACGTTTCATGCCGAG
3377	GGTTTCGACGAAAAGGATGGTCGT
3378	GCGGTACGTATTCTAACCCGACGG
3379	GGTATTCGCCATGCTTGGTCTCTG
3380	GAGCCTCTCCGATTCTGGCCCAGA
3381	TGGAACGTAATACGAACGCCGAAC
3382	GGCAGAAGTGGAACTGAGCTCGAT
3383	CGGGTAGGCCTTCAGGGTACAGGT
3384	AGCGATCTTGGACGCCGGCACGAT
3385	GACCAGGTTGGTACAACGCCTTGG
3386	GATGTGCTACAGGACCGCCTACGC
3387	TGAGGCGCACTCATTAGGAGGTGT
3388	CACCTTACATCCCGAATCCGCGTA
3389	CCAAACATAAGGTGTGTCGGTCCA
3390	GCGTTTGCTAATGGTTGCGATTGC
3391	CCCTTGCCCTCAATCTGTATTGCA
3392	ATAGTCCCGTGGCGACTGTGATCC
3393	GAAGTTCCCGGCCCGAGTAACATA
3394	GGGAGCCACGACAGAGCTCCTAGG
3395	CTGACTCTTACGAAGCGCACTCGC
3396	AGGTATAGCGGGGCGTCTAGCAAA
3397	TAAGACGCATTGCTTGGACCATCC
3398	GCCTAGTAGGCCACGGCTTCATGC
3399	CGTGCCCTAGCATACAACGTTGGG
3400	GGGAATGCGGCAGTCTGTCTACCT
3401	GTTGAAATACTGGCCCCGCGGGAC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3402	CGGACAGGTGAACCCAGTCACCTT
3403	CAACAGCCCGCTCCTTGGATATAA
3404	TTAAAGGAATCAGGGGGACCCGCC
3405	CGGGTTGTAACGCTGTTGGACGAA
3406	GGTACGCAGCGGGACCAATAGAAA
3407	ACTGCAAGCCTCTTAGTTCCTGCG
3408	TCAATACCACCCAGAAACTGGGCG
3409	GGCAGTTGACACTCATCGACCATC
3410	TAGCACGGCCATAAGACGGTTGAA
3411	TCCACAATGTCAGCTCACTGCAAA
3412	CAGGCGGAGGGGTTTTACATCCTA
3413	AGGGCACTCGAAGATCCGACGGGC
3414	CGCAATGCCTTTTGCTGTGGTAAT
3415	AGAAACGCAGACGTGGCGTTTTGT
3416	TGAGCACGAATGTCGAACAGTCAA
3417	CTCGTTTCCATGGGGTAACCGACT
3418	CCTCATAGCTACGGGTGGACGACG
3419	GTACGCCGTGTATCACCCCATTCA
3420	ACCCATAGTTCGTCGATAGCGCGA
3421	TCTGCAGTGTTGCCCCTCCGACGC
3422	TGCACATGCAACTAATAGGTGCGC
3423	CAGCGCAGTGCCTTACCAATATGA
3424	TTACGCGCCGAAAACACCTGAACA
3425	CTCCCTCGCTTTATATAGGCGGCG
3426	GTCGGACCCCGAGAGTCCTGTTAA
3427	ATCGACGAACAGGGCCTCCGGCTT
3428	TGGTTTTTCACCTCCGTCCTCAAG
3429	GGAGGGGGCCAACTCCTTGACTTG
3430	TCCTGTCTCGGCCTTTGGGAACTT
3431	CAAGCCATTACCCGCTAGCTGAAA
3432	CGCAACCGACATTATATTTCGGCC
3433	TTGAGGGCGACTGCAACACACAGG
3434	GCTCGAGTAACACGGTTGACCCGA
3435	CAGCCCTAGCGCCACGGTAAAATC
3436	GTCATTAGCGACTTACCCGCCGTA
3437	CCCAGTGGCCGGCCCTAGATAATA
3438	CATTCCGTATGCTACTCGCGAACA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3439	AAGTTTTAACGCTCAAGGGGGCCT
3440	TTGGCGGTTTCGGTACAGGATCCT
3441	TACTGCGATGATGGGGATTTGACA
3442	CGGTGAGCGAAGATCATCCCCTTA
3443	ATGCAAGTCACCGACCGGCACCTC
3444	CAAGTGCCGCAATTGGCCTTTTAT
3445	CCCGTGGTGGATACCTGGGTAAGC
3446	CCGTCAGGGTCTAAGGACCAGGGT
3447	CTTTCCGTAGGCGGTGATTTCCAA
3448	GCTGAAACTGAGATGGTATCCGGC
3449	CCAACGAGACAGCATGAAGCTCCT
3450	ATAAGTTCGTGGGCCGGCAAGGTC
3451	GTGGCCAGGCCATAACTGGTCACT
3452	CGCTTAGCGCGAGACTCTGAGGGC
3453	AAGAGCGGCGCCCTAGAACCCAAC
3454	CCACGGGAACGTCTACGAAATGAT
3455	AGTCGTGTATCAGGTGCCGAGAGG
3456	TGAAGCGGCTGGCGATAAGTAGAT
3457	CTGAGGACGTGCGGTTCATGCTGA
3458	GAAGGCGTTCGGAAAGTTTTTCGT
3459	AAGAAAACCACGGCTGAGACCTGA
3460	TCAGCCGCTGTTGCAGGGAGAAAA
3461	TTCTGGAAATGGATCGGATAGGCA
3462	GGGAAATGGTCTTGTTGGCGACCA
3463	GGTGTCGAAGCCACGATGTATCCC
3464	CCCCGACTCCCTTCGGGCATAAGT
3465	CCAAATGCGATAACGCAGCGTGAT
3466	GCTCGCCAACGTACGAGGCTCAGA
3467	GGCTTATCAGTCGCCACCAGAGAC
3468	GATGTGACCCATCCATTCCTGGGA
3469	TCCTGGTTTGGTATCCCCGAATCA
3470	CGCCCCGTATATAGCCGGTAAGAG
3471	GGTTCACTGTAACGATCGCGGCAC
3472	CCGGTATAGAGGAAACCCGGACGT
3473	CCTCCCAGGAGATCCTACGCAATT
3474	TGAAACTCGTCACGCTCCTTGCAG
3475	TGTTGCGTAACCACCAACCCTCCT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3476	GCAGCGCAACCTTGTACTTCTTGC
3477	CGCAAGTGGGAGCCCAAGAGTTTG
3478	TGCAGGGTAACGAGGGTAAGTGGG
3479	GAACTGTAGGGTCTCGCCGGTCAA
3480	CGAGATGTCCAGCAGCGGTTGTTA
3481	TTGTGGTTGCTCCGGGTAAAAGGA
3482	TCTACGCATCCCTGGGTAATTTGC
3483	AGAAGCTGCGAGTCACCGTGACTC
3484	GGGCGGTGTTGAAGGGCTCTATAC
3485	TTCCACAACGGGTGAGTAGGACGG
3486	GCAGCCAGACTGGCCTACCGATCG
3487	CCCGCCGAGTTGGTTGGCTAAACA
3488	GCTAGGGTGGTCCTTTCAGTGGGT
3489	CGTGACTCTCCTTCTTTTCGGCAG
3490	ACTGCCCATGGGCCACTAGGCTTG
3491	GGCGTACGAAAAGGCCAATCACTT
3492	ACTTGTGGTCGACAACGATGTGGC
3493	CCACCACCCCTGACCCGAAAAAAT
3494	TGTTGTGCATCACAACATCAGGCC
3495	GACCACCCGGTAAAGAGGGATGGT
3496	GCCACCCCTGAAGCACTCGTTATG
3497	GCTACCAGTTGGAAGACGGGTTGC
3498	CAACGTTCGCATCCCACAGTTGTA
3499	TATCGGGTCGTAATGGGCAAAGAG
3500	TCGGTGTGATTGATGGATAACGCC
3501	AGAGGTCGAGAGCCCGATAACCTG
3502	GTAGTTAGGCGCGGCCCTGGCTCA
3503	TGATTCTCGATGTCACGCCGAACA
3504	GATGGTTCGCCCTTGTGTCGCAGC
3505	GCGCAGTTACGTCCATTGTCCCAC
3506	CCGCCTGATTTAACAAGCCAAGGT
3507	GACCAAGTGCAGGCGTCAGTCTGG
3508	CAAAAAAGCAATTCGCCCTGGACG
3509	ACTGACCTTCTCGCTCTCTCCGTG
3510	CTCGCCGTGTATCGCTAACCCTCT
3511	CGGCATTTTTCACATGCTGTGTTG
3512	ACGTAACGCCTGATGGGGTACACC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3513	CCCTGTGACCGTGGGAGACACACA
3514	GCGCATACTCTGGGTAGTCGGCAC
3515	TCCCCTGCCCATCTCTGAGTTAGG
3516	TGCAGCGCTAACATAGCGGGTGCA
3517	GCAGCGTCCACAGGAAACCGCAGC
3518	AGCGTACCATCGATGGGGATTCGA
3519	TGGCCTCGCGATCACCACGATGTT
3520	TTGGTAATCACTCGGCCAGCGCTA
3521	CGTTAGTAACGATCGTCGGTGCAA
3522	AATCGCAGATGGTTCGTGGCACAA
3523	TAAAGCGTCTAGAGGCCGGCTGTG
3524	TGGCTAAACGAAACTGGGAATCGG
3525	CCTATGCAGCCACTGGTGTCCTTC
3526	ACGTGAGATCCAAGGGTGGCTCCT
3527	TAAACGCCAAAAACCACGAGCAGG
3528	CCATGGAATGGAAAGCATTGGACG
3529	ATGATCCCTGGGCTTAGTCGCCTT
3530	ACCGTATGCCTCAACAGAGTGGCT
3531	CCACCAAATCGCATAAGCTCCACC
3532	TCTCAGTTTAATCCCGTGATCGGG
3533	AAAGGACTACGCCCATCGCTCACA
3534	CGGGAAGAAAGGCCTAAAGCTTTG
3535	TTTTGGACATTTTTCTGCATCGGG
3536	GCAGGGGTCCTTTTCCACGGTAAT
3537	TCAAATAGGGCGTAGGCAAGCTTG
3538	ATGAAGTTCCATCCTGTCCGGGCC
3539	AGAATGATTAAGCGCAAACGCAGC
3540	GGCAGCAGAGAGTGGCCTAGTTCC
3541	GTGCAGAGCCGGCCTTATGTAAGA
3542	CATACGGGTATGGCGATGGTTACC
3543	AAGAACAGGAACCGCTGACAAGGA
3544	GATGTGTGTCGCGTCCTTAAGGGC
3545	TATCCATGTAAGGCTCCTGAGGCG
3546	AGTTTTTTCCTAAACGATCCGCGC
3547	CTGACCGGACGACCCAGAATGTAT
3548	GCATGTGGTCAAAGCTTGTCGATG
3549	CAGAAGTGCATGGGTTCGGATGAA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3550	ATAGCGTACCGGAGGGCTTACCAG
3551	AAGACTTGGCGCTTGTGGGTAAGG
3552	TATTGTGGCGCCTCACGCGCAATC
3553	TCGGCCATGGGATTTCACAAAGTC
3554	TGGTCGGTGCCGTTTCACCTTTAC
3555	CATTTCCGCGGGCAGGAGAAAGAT
3556	CCTGAGTCGCGATACGACTCAACA
3557	AGGTGTACCGCCGTCGGGTTATAC
3558	TCCTTGTACGAGCCAAGCCTGGGT
3559	AGAAGCCCGAAGTCCCGTGTAGAC
3560	AGAGGGGCCCTTAGGCAAATACGT
3561	ATGCGGCAACATCCGATCGTAGAT
3562	CGCAGTGGGCAGTAAAGACAGAGG
3563	TCGGGTAGTGCAAACCTCAATCGT
3564	TCTTCACTGTGGTGGACTTGGGG
3565	GTCCCAGGGCGATTGGTACTAAGG
3566	GGTAGATCCAGCCATTGGGACCTC
3567	GGGGATTGTGCGCTCCAAGGACCC
3568	CTCTGTCCTAGACTGAGCCGTCGC
3569	CGATGAACAAATGAGTGCGTGTGA
3570	GAGGTCGAGCTGCCTGAGAGGAGT
3571	CAGTGGGACTGCTAACGTGGGTCA
3572	GAGTCGCTCGAGGAACTACGGCCG
3573	CGGCTACGGAATGATGCAGGATGG
3574	TCGCTCTCGCTATGGCAATTCTGG
3575	TGAATCACGGCCCTCTCTGGTACA
3576	CAGGTGCCATCGAGCGCTTTAGTG
3577	TGGGAAAATCGAAATCGTCAGGAA
3578	CGGGGAGGAAGATGTTCCAGCGGT
3579	TGTGGACCGGTGGTCACGTCTTTT
3580	GCACGTCTCGCAATCTGCGATCAG
3581	CCTAATGCCGTATCAGCGACCAGA
3582	ATAACGCGGGTGAAGGATTCGTCT
3583	TTCAACCTTGTGGGGCGTCCCACT
3584	CTACTTCCAAATCTCCGCGTCGGT
3585	AGCGAACGCACTGCCAGTGGATAC
3586	GAAAGTGGCGGCGAGGAAAAACAC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3587	CAGGGGGCGCATATTTGACAGATT
3588	TAACTCGCTGCCCTCAACTCAGGG
3589	TCGATTGTTGGGTCTACCGTGGTT
3590	GCTGGGATTAGTGCCGGGTAACCG
3591	TGGTTGCAACATCGCGCTATTACG
3592	GGGCGTGCTTTGAGCTGAAGCGTG
3593	ATGTTGAGGTTAGTCCCCGACCGT
3594	GACCGCGTAGTTAGCAATGTTGCG
3595	CCAACCCACTGACATCGATGGAAA
3596	TGCTGCTATTGTCGCACCGATATG
3597	TACAAAGAATCGGGACCTGCGACT
3598	GCGCCTCATCCCGCATCGAATTAT
3599	CGAGGGATTTTGACCAGTGGATGA
3600	TGATAGGCATACGCGGAGAAGTCC
3601	CGAGTTGTCAACGGCCATCGAATT
3602	CCCGCACCGGATTATTAACGAACC
3603	TCGTCCTTGGGTCCCATGTAGAAA
3604	TCACGAAGCATCTTTGCGACGTAA
3605	TGTAAGTTGCCAACTTTGCGGGTT
3606	GCACACCACCGGCAGATATCAAGA
3607	GTGTGGTTTGTGPATGCGTGGTGA
3608	CAGCTGCGGCCCCACCTTCGATAC
3609	CAGCGAAGGACGACTACTGTGCAC
3610	CAGCAGTTCGTTGCTTCCTGATTG
3611	AAACAATGGAGTGTACCTCCCGCA
3612	ACTATACGAGCATCATGAGCCGGC
3613	CTTGATAAGGTGGGATTCCGGGCA
3614	TTTAGTAGAACGCTGCGCGCGGTG
3615	AACTGACGTTGAATAAAACCGGCG
3616	GCTTTGTTCTACCGCGGATCATCA
3617	TGATATGCAGCGGCTCGGCCTTAT
3618	CGGGAGTGCGTTTATGTCCATGAT
3619	CAAATACCGGGAACGGATCGAAGC
3620	GATCAAGCCGAATGCTTTGCAAAG
3621	AGAGAGGATGCGCTCCGGTTAGAG
3622	CTTAGTCAGCATACCCGCGGGCAG
3623	GTGTCTCGGGGCGCAGGACCTGTA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3624	AACGCTCCACTGCCGTGATTCACT
3625	GATCGTTGAGTCATCCCGTGGAGT
3626	CCTGGCCGGGTGCAATACTACAGT
3627	CGTAGCCCGAACGTAAGGGTCAGC
3628	CTGTGGCTTCAAGAGGATCCGTTG
3629	CTTGGGTCGGTGTAATGTCCTCGA
3630	GCCGTTGTGCGCTATTCTTACGGA
3631	TCGCACGATGGCTAGAACGAGTAA
3632	ATTTGTTGCAATGGGATGGCTCTG
3633	CGAATATCCGCTCGAACCTGACAA
3634	AAGTGGCGTGCGTCATAGCGCGAC
3635	TGATGTCCCTCCACACCGTGAACT
3636	CAAATGAAGTCGGGGCCAATATTG
3637	GATGCATAGCGTGATTCCGGTGTA
3638	GTGACCGTAGAAGCTCACCAGGGC
3639	ATAAGGACATATTCGGCCTGGGGA
3640	AGATCTCACAACCGGAACCGGACG
3641	GTTGCGTTTGGGGGCGTCATACAA
3642	TGTGAGGTTTTCCTAAGGCGAACG
3643	CATCTTGGTTTGCGAACGAACTCA
3644	TTCCTGTCACAGATTCGTGGCCTT
3645	AACTTACCGATCCCTGAACGTGCA
3646	CCTATTCTGGACATGCGGCCACAT
3647	GTCGATGGGGAGCTCCAGTTGCAT
3648	CGACCGTGAGGGTCCATACGTAGA
3649	TCTCGTTTGCACGCAACTGGGCCA
3650	ACTCCGCCGAATGAAGGAATAGCT
3651	CCTCGACCTGGCGTGATGGAAGGC
3652	TAACAGCCGTTTTGCGGTTCACAA
3653	GCCTCCTGCAGTACGGTGTCTGTT
3654	GGCAGTCGGTCCCACTTAGTTCGA
3655	TAATCCACGGCTTTGGTGGAAGTC
3656	CGGTGCAAGATCCTGGTTGTGTGA
3657	TTTCACCACTACCTTAGGTCGGCG
3658	CATCCCGTACCGGGAGGACAAGTC
3659	ACGAGGTAAAGGGATCCGTGCTGG
3660	CTAATAGTTTGGCAGAGGGGCGCT

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3661	AGCATGGTAACCCTGAGCCAGCAG
3662	GGAATCCTTGTGGGAACAGCCGAT
3663	CTGATGTGGGAAAGAGGGTGGGAC
3664	ACTTTTTGCAATCCCGGCGTTGTA
3665	GCGATGACGTGACGAGTTCTCACC
3666	CCAGGTATTGAGCCCCGCCATATA
3667	TTGGACGTCCTCCGAATATTGGCA
3668	GGTAAGTGCGGGAAGTACGCTGAC
3669	CCGCCTGAACCGTCGTAGGGATTA
3670	CGTTTTTGAGTAAGGATTGGGCGA
3671	TGTGGTATTGAGGCATAGGTGGCA
3672	TCCGGAAGGAAGGCGCGATATGGC
3673	GTTGAGCGAATCGGACGGCTTTAC
3674	TGAGTCTCCGAACGACAAGCGATC
3675	AGTGAAGAGGGAGAGTCCAACCCG
3676	GTGAAGCCTGACGAATCCAACGTG
3677	GTGCAGGCCTGTATCCCCATGACT
3678	GTGGGTTTCCTACACACCGGATGA
3679	GCGCCGTCGACTCTCTTCAGCTGC
3680	CTAGGCCTGCCATCACTGAGCAAT
3681	TTGGTGATGACTCATGGCCAGACC
3682	TATCTCCCGCGGGGTATATTACCG
3683	CCGAGGGACACGTATCCCTGTTCG
3684	TATCCCGCAGCACGCATTCGATCT
3685	TGATGATAGAGCAGGGTGCCGTCA
3686	GTAGGAGCACACATTCGGATTCGG
3687	CCCTTACTACGCCCAGCCCTTTTG
3688	GTACCAGGGGGTGTGCTCCAAGGG
3689	TGACCAGGCGGACCAGACGGTTTT
3690	CGTAAGCGGCGGTAGGTGTGCTAC
3691	CGCGGGGAGGGATCAGCAGTTTTG
3692	AAAGCGTATCCAGAAAGGCCATGG
3693	AAGAAGAGACGCATGCTTGGACGT
3694	TGGCCATTTGCGGGAGGTGGCTTA
3695	AACGCCGAATTGAGGAGGCGGTTA
3696	GCCTCATTACGACATTGGCAGCAT
3697	TCGAACGCGATTTTGGAAATGCCC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3698	AGGAATTCTAGCCGAAAGCCCTGC
3699	TCCGCTGGTTGGGTGCTCTGGTTG
3700	GTCGCGCTCCGTCCGATAGTATGA
3701	TGTGCAAGGACGGATGATTGCACT
3702	GGACAAGCGGCAACCTGGGAGAAG
3703	ATGCGGTGGCTACGGACTAATCCA
3704	TGCACGCAGGTGGAAAGCAGGCTT
3705	AGATTGTGGGAGTTGTCACGCTCC
3706	AACAGCAGTGAGGGCTGAAGCTTG
3707	CTGCCTGTTTCCTTCACGCTCCAT
3708	CCAATCCACTTGAGTCAACTTGCG
3709	CATTCTACCGCCCAACTTTTGCAA
3710	CGGAGAACCATGCTGAGCAGTCCA
3711	GACTGTTCCTCCAGAAAGGCGCAT
3712	AAATAATTGCTCCACGCGAAGCGC
3713	GGGCCTGGAAGACCAACCAAATAC
3714	ACGACGCGAGCACGTAGATATCAA
3715	TACGGGATCCTCGTGGCTACATCT
3716	CAAAGTCTCCCCGACCGAGTTGAC
3717	CCCGAGGCGAAGATCTCTAGGCAC
3718	CAAAATTCTCGCCACGAGACCCTA
3719	CTGTGCGCATTCCAAACACATCAC
3720	CATGGAAATGCCAGCTGCCTCCAT
3721	CGCGAAACCACAGTCCTCGTCGGG
3722	GTCCGCAGCTGTCCCGACATTGGT
3723	GTCTCATTGGGACGATCGTCTCGA
3724	AGAGCGTTGCATGCTTGGCTGCGG
3725	CTTCCGCCCCTGTTCGCAATGAGG
3726	TTGCGGTTCATACCGAAGCCAACA
3727	TGCGCGAGAATCGTTCGTACGACG
3728	TGTATACCGTAGGCGTCCGTGGGG
3729	TGCGGGGTATAGGGCTTCCTTATG
3730	ATCCCAGCCCAAGCAGCAGACGCA
3731	GTTCTTGGCCACAGGAATGGCCGT
3732	CACATGGGCATTAATTGCTACGGC
3733	ATAAGTCGGTCTGCCTGGCAATGA
3734	ACCTCGAGGCTGAGAACGTCAAAA

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3735	GCGGAACGCTAGCCCCTTATGGTT
3736	TGCGAGGCTCCTGGAGCAATCCAA
3737	ACAGAAGGGCGATCGCTCTGGCTG
3738	GGTTGGCAAGGGGCCAGCTCCTAC
3739	ATCGCTTCGCTCTATGGAGTCCGA
3740	CGTCCCGATAGGCCGCCTTGATCT
3741	GAATTCTGAGGCGGCATTGTCCAC
3742	CAGCCCATCAGTATCGGCTGCGTA
3743	TGGAGAGTCGGATCCGTAGCGTCA
3744	TGGATCCAGTGCGAGTCTTGGCCG
3745	ATGCGGTCGTGCTTGGAATCCTCT
3746	ATCGCACTGCCGCGTCATAACAGC
3747	CACGTCTCCGCCGGAACACAACTG
3748	AAGACAGTGGGTGAACGCACGGTA
3749	ACGCGCATAGGTGGTCAAACATCG
3750	CCCGGCGGTAGAAATTGACAACCT
3751	AAGGGATACTCAGGCGCCTGTTTT
3752	CTTCTCTCTTGTGCGGGCTCCCGT
3753	TTGAAGGGACCTGCCAAATGGCGA
3754	ACGCATGACGACGTCCAGTACGGG
3755	AAATGGATGTTACGCCGGCAAGCT
3756	TCGTGCGAGGCCTCTTCGGCATAC
3757	TACATCGCGTCGAGTCATTCTTGG
3758	TCACACCACATAATGGCACCACGT
3759	CAGGTTCACGGTTGAGGAGTGCGA
3760	GGTGTTACACCGCTTCGTTGTCCT
3761	ACAATAATAAGGGAGCATCGGCCG
3762	TCGGGTCCTATGATCCAGTCCCAA
3763	ACCCATTCCTCCTGCGGCGATCAA
3764	TCGCAGGTGTAGACGGACGAAAAG
3765	CTCTTGCGTAGTAATCGGCCCGCA
3766	TTCCGTGTCACGCGAGCCTGCTTT
3767	ACTCTAAGTAGGGCTGGGTCGCGA
3768	TTGGTGGCTGTAAAGGTGCTTGGC
3769	CCGAATTACCCATTCATACGGCAC
3770	GATGGATAGGTTCGCTTCCCGCAA
3771	ATGACGGAAAGAATGTGATTCGGC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3772	ACGGTTCGGCTTCTGTTAGTCACG
3773	GGATCCCGTAATTGAGGCGGCCAC
3774	ACCCGTTAAGTCGACGCCTGCGGG
3775	TTCGATGTGAACGGTTGGCCAACC
3776	TCGATCGGGAGTCTACCGCCATGT
3777	AGCAACGAGTTTATGAGCGCAGGA
3778	TGGGAAACGAATGGGTGGCGGTTG
3779	TCTGTGTTGCCCCACCTACAGCAA
3780	CCTGCATTGGATGTACCCGCGGGT
3781	GAACGAGGTCCGGGTTTGCATCTC
3782	GGCGCCGAAGCAGAACGACCATAT
3783	AGGCATCACGCATCAGGTACTTGG
3784	TTTACAAAAGCATCGGCCCTGGGA
3785	CCCAGGCGGTCAACCAATTGTAGA
3786	CTGCAGCACGTGCCTGAAATTCGT
3787	CCGTTTTGCTCCAGCTATGAGCGT
3788	ATTTGTGCCGCATTGGGGTTATTC
3789	TAAGCAGAAAGCCGCAACTCCGGT
3790	GCGACTGATATAGTGCTCGGACCG
3791	AACTCTATTCTGACACCGCCCGAA
3792	GTGCGCTCCAAGAAGAAACACACC
3793	ACGACCAGCGGTCTGAGATCTAGG
3794	ATCCCCTCCTCAGGTCGACGCTGT
3795	TGACATACGCGTCACCCAGCACAG
3796	TAACCGCGACTCTGACTCCCTTGT
3797	AAGCGGTTTGATCTGTGCAATCGG
3798	CTGTCAACTCGGTCGTCCGCACAG
3799	AACTTTGCCGTTTAGGGCAGGTGA
3800	GCTGAAGAACTCCCAATTCGCTGG
3801	AAGATGCGATGGGTCAGTCCTCGT
3802	ACCCACCTCTGAAGGTTGAGACGG
3803	AGGCTACGCACCCTCGAGAGTGAC
3804	CGGTCACGAACGTGGTCCAGTTTT
3805	CAAAGCAACGCGCGCCACTTAAAA
3806	ACGAGGAAGGAACTGATCCCCAGT
3807	TTCGCCACTATGGGCTCAGCATTA
3808	CGCTCGGCAGAGGAG[ ]CCACTCAC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3809	TGTTGGCACGACTCCGTCCATGAA
3810	TGCCTACCCGGTGATTGCGACATC
3811	CAACGGTCGGATCTGAGGAGATCT
3812	CGTTACGAAGCGAAGTTCCCGAGT
3813	AGTGACGGCCAAAGTCGCCATTCT
3814	ATTCAGCTGGGCATAGGCGATGGG
3815	TAGGACAGCGTGGCTGGCTACACA
3816	AATTTGTCCAGCTCTGCACGACCG
3817	TGAGTGGGCTGTGATCCGTTCCAC
3818	TGTGGTGACACGCCAGAGCTGGTT
3819	CCTCACAGGTGTGAGAGGAGCCGC
3820	AGTCCCGCTTCTGCAAATTCCGAA
3821	TCTGCGCCTACCCGTAAGCTGAAC
3822	GCCTCCTGAGTTGATTCATGCATG
3823	CCTAACGGTTGGTTCGCCGTTTTT
3824	TCGCAAACCCACGAATGAGTCCCG
3825	AGTGCTAAGGTGGGCGAGCAGAGG
3826	CTGGAGACTGCGATGGCAGGGTTG
3827	AAGGGATAGTGATGGCGATGGACG
3828	CTATCCACGGTGATGTCCGCCATT
3829	CGGACTAGAACTTGCCAAGCACGA
3830	AGAGCCGGATGGCATTGCATGAAC
3831	AGTTGGCTAGCGGTCGAATGAGCA
3832	GCATGCGGTCACCGCTTCATCTAA
3833	GTGAGATTCCAAGCTCGCCGGTGA
3834	GCCATCCACCGCACAATGAACGCT
3835	GGGTGGTCCTCACTGTGGTTGGCA
3836	AGGCGGCTACGACGAGCGTCGTTA
3837	GCCAAGTGATCGTGCTTCCGCGTA
3838	TAGCCGTTTATTCCCTTGATGCGC
3839	ACTATGTGGGACGAGCGTCTGCGA
3840	GCACCTTCGAGAACCCATCAGATG
3841	ATTTTCTGTACCGATGCTCACCGG
3842	CACTGGAGCAATAAATGGCCAGGC
3843	GGGTTCACGTATCTCATGGATGCG
3844	GCACGCTCCCAGTATGCTCCTTCA
3845	GAAGGGACTTAGTCCGCGGCCCTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3846	TTCGTTACCCTAAGGGCGTTTGCA
3847	GTTCCAGGTCACGACGAGCTGCGC
3848	TCGTACGTAGTCACACCGCGACTT
3849	GGGCTGGAGTAGCGGTCTGCTATG
3850	TAGCGGCACTCGTGTTGCGAGTGG
3851	ACGTTGGGTTCTGACACGGCGATT
3852	TGTTGCTGCGCCCCAAGTGATCTT
3853	CCCAGGTCGTTACGGTGCATCACA
3854	CCTAGTGCACAGGCAAATCGGGCT
3855	GGCGTTCTCCAAGATAAGGCCAAA
3856	ACTTCGATACCGTGGACCTCGCCA
3857	CTGAGCGCGCTAAACGTCCCTAGC
3858	ATCAGATAAACGATCCGACGCGTC
3859	CATGGCTGAATTTGTCGACCCTCT
3860	CGAAAGCGAGCAAATAGAATCCCC
3861	AGATTGCCCTGCGGCAGGTTGAAT
3862	AAGAGGCGGCCGATCAGTTAGAAA
3863	CTGATGCCTGTAAGGAGGCGCTCG
3864	AATCGCGAGGTTCGGCAGACAAAG
3865	CGTTGGGACACGGACCGTTCACTC
3866	AGATGTGTGCACTCGCGGTCATTT
3867	CAACTCGAGTGGCGGTAACATCTG
3868	ACCAAGGTTGCGATTACGGGAAGC
3869	CGAAGCGGTAGACGGCTCGCGTTA
3870	TCTCGCGAACAGGAGGGAAGGCGT
3871	GTCCCGATTTGCGCTGTGAGGAAA
3872	TACCACGCGTCGGCACGGAAATGG
3873	AAATGCTACCCGATTGCGCGGGAT
3874	TCGATTCAGGTTTGTGCTGCGGAG
3875	CCATCTCATCCCACTATGGCATGC
3876	CTGGCCCGTGTTTGGTTGAGTCGA
3877	GACACACACGTTGCAGGGCTTCCC
3878	TCGAATCGAGTCGATCGTGAAGGT
3879	GAAAGCACTCGATCGCGTTGGATT
3880	AATTACGCGAACATGGGGCGTCAA
3881	GTGCTAACACTGTGGTCGTTCCCA
3882	GGTAAGCGCCAGCCAGGAGTTGTC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3883	GGCGATCGTTCAGGAATCGCGTCA
3884	CTGGCTAGACCTCCGACACAGGCT
3885	CGGGTTAAACGCCAACTGGCCTAG
3886	ATCGCAGCCTGGCCGCCTAGTTTT
3887	GGCGTAGCCTAGCAAATTATGCCA
3888	ATGACGCGACGGAGACAATACGGC
3889	GTTGCATCACGAAAATGCCGTCTT
3890	GAGTCATGCGTTCCTCGCTTTACC
3891	TCTGAACCGGTTATCCCCAACCTC
3892	TGCCTCTGGTAGGCGCCCAGTTAC
3893	CTGACGGTTTTCATTCGGCGTGCC
3894	TGAACACGAGCAACACTCCAACGC
3895	CGGCGCGCGAAAGACTTGAACTTG
3896	GCTACGAGTACCCGTCGGAAACGC
3897	ATACCCAACAGCATGGAGCGACCA
3898	ATCGCATCGCATCGTATTCACGGG
3899	CGGCCTAGAGGTGCGAAAGCTATC
3900	TAACGCTTTTCCGAGGCCGA1TCT
3901	TCTGTCCTAGCACGCCGACCTGCT
3902	CTCATCGTTCAGTCGGTCGTCGTA
3903	TCGTCGAGCAGATAGCGGGGTAGG
3904	TCGACCACAGTCAGGACACTACCG
3905	TGCGATTCTATGATGTCCGAACGC
3906	CAAATGCAATGGCAAGCACTCACC
3907	TCTAATCCATCGTTTTTTGGGCGA
3908	TCTCAACTCCGGTACGACGAAACA
3909	CTGAAGAGGGTAGCCTGGGAGCGG
3910	GGCACAATTAAAACGCGCCGCGTT
3911	CAAAGGAGGGTCAAAGGCCAGAAA
3912	TTTGCGGCCGTGACGAGCAAAAAT
3913	AGGAATGTGCGTGGCACCTGTGGA
3914	TCGTGATGACTGCCTTCCGAATCA
3915	CACGTCGACATGTTTGGTACCTCG
3916	TTGCGGTAGTTTGGTTACCACCGT
3917	GCAGTGGCGACAAATACAGCTGAG
3918	ACGGCATGATGGAGGGATAAACGT
3919	TGGGATAATCCGCAAGCGCATAGC

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3920	CCTAGCTCTGCTGCGTCTTTGCGC
3921	TCCTGGAACTGCTGAAGGCGACTT
3922	CGAAGGCGGCATGGTGTAGTCTCC
3923	AACATTGTTCCCATCCCAGAGCAC
3924	CCAGGCAAGAAACAACCACGCGCT
3925	AAATCCACAGGCGCGCCAAAGCTG
3926	GCTCACCGCAGACTCCGCGCGATA
3927	TAGGTGGCGAGAGAGCGCCCACAA
3928	GGCGTTGGTGTGTCGGGACCATGA
3929	TCTGAATGCTTCCGTGCTTTCGTG
3930	ACGCTCTGGACCTCGCTCATTCGA
3931	TCCTTTATGCGCAGCGCTCGTGTT
3932	TTGCCGTCCTGCAGCAGGTAGCTC
3933	GGTCTAGTGGCAGCAAGGAGCGAT
3934	GGTAACGCGACCAGCTTAGACACC
3935	GTGGCGATTGGCTTCCTATGCATA
3936	TCAAAATACGGCCAGGAAGGGCAA
3937	TGCCATGCAGTCAGGTACGATGGT
3938	ACAGGTTACGTCGTGTGTTCCCGT
3939	CTCATGACGAACGAGCGGTCTGCA
3940	GTCGTGCGAGAGGCCAAGACCTTA
3941	GCTGGCTGACGCTGTTGTCAGAGG
3942	GCTACAGTGCTGCGTCCCGTGCCT
3943	TTTACGAGCACCAAGCTGGCGTAG
3944	ACGAGTTGACGGTCGTAGGGACCG
3945	TCGGATGGTAGGAGGCGAGATCGG
3946	ATTATGCAGATCCTGTGCATCCGC
3947	AGGGATGGAGACGAAGGAAGCATT
3948	ACCCCAGGACCCGTATTCCCTAGC
3949	GCACCATCCTGGGGCTTCTCAATG
3950	TACAATCCGTGGACGTTTGCTCAG
3951	GGTAGGCGAATCCGACTGGCATAG
3952	AGGACCGAACCCATGTGCAGCATC
3953	ATACACCGCACAGAAGCACAGCTG
3954	TCCTTGGCGGCCGTGTGTTTATTG
3955	CTCCACGCGAAGGGCGCTTGTAAC
3956	TGGCCCTGCCATCCTCGGATTCAG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3957	TGTCTATTCGCCAGCGTGAGCATC
3958	TGTTGTTGGCACGCCTCTACGGCA
3959	GTGCCTCAACCGTATCGTGGCGGT
3960	TCCTCGAAGTAGCGTGACCGPACC
3961	AAACAATTTCCTGCACTCTCGGCC
3962	CACAAACTCGTCGAGGCACACAGT
3963	GACGAAACGCTCGGCAGAAAGCCT
3964	TCAACTCACACGGGACAGCAGTTC
3965	TCACGTGGATGGGCTTAGCTGGGC
3966	AGGTGTTTGTTCCGACTGGCCACA
3967	TCAACCCTCTATTCCCGAGCATTG
3968	ACCTCACACAAGCGTTCTCGTCGA
3969	AACAGCATGCGGTCGCTGGCTTTC
3970	CACGGACACGTGTTACATCCGATG
3971	CTGGGAGCCTGCTGATACATGGTG
3972	CGTCCTATGGGCCATGGCCAGGAT
3973	GTCCCCAAATCTCGCTTTACAGGC
3974	TCACAAACCTGTGCGTGCATTGTC
3975	CACACTCGTGGCCTGCGTTGGGAA
3976	GCCTGCACTTACGGCTATCTCGCC
3977	TTGGCGTGGCGATTACCTGTTATT
3978	TTTGCGGCTGAAGTTTACAGGGTG
3979	CACTTAAGGGGCTGACCGAGCAAC
3980	AGAAAACGTCAATCCGCCACCTTT
3981	AACAAAACGGCGCTCCAACAAACG
3982	GCCTCAATATCTGGTTGCCGCCTG
3983	TTCCACAGTCAATGATGGGCGTGC
3984	GATTCCCAGTCTACCCGCGAGCAT
3985	AGGCCAATTACGACCCTGTCACGG
3986	CATGCGAACGTTCCGAGGAGACGG
3987	CACACGCGATGGGTTGTGTGACGC
3988	TCCGGTATTGCGCAGGAACCATAG
3989	AAGATTAGGTGTGCCCGCCTCAGG
3990	TCGTTACGCCCCGACTCGACGATG
3991	ACTAAAATCGCCAGGTTGCTCCCT
3992	AGGATGGCCACGCCGAATCAAAGT
3993	TGATGAAGCAGCTCATCGCTGGCG

TABLE 1-continued

Seq. ID No.	Decoder (5'-3')
3994	CCCCGATGGGTCTTTGTTGGACTC
3995	ACACGAGGGCTGCTGGTGAGGGCT
3996	TGGTCACCAATTTGATGATCCGAG
3997	AAGGCCGCTTGCATGCGACAAATT
3998	CCAGTGTTCGTTCATCGGTGGCGT
3999	CCGACCGCTACATAGGTGTGCGAA
4000	TGTTGAAGCCGTTCCCAGATGACA

[0207]

TABLE 2

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1	TTCGCCGTCGTGTAGGCTTTTCAA	TTGAAAAGCCTACACGACGGCGAA
2	TTCGAAGCGCACGTCCCTTTTCAA	TTGAAAAGGGACGTGCGCTTCGAA
3	AACGCGTGGGGAATGGGACATCAA	TTGATGTCCCATTCCCCACGCGTT
4	CCGTCGCATACCGGCTACGATCAA	TTGATCGTAGCCGGTATGCGACGG
5	ATGGCCGTGCTGGGGACAAGTCAA	TTGACTTGTCCCCAGCACGGCCAT
6	TTGCAACGGGCTGGTCAACGTCAA	TTGACGTTGACCAGCCCGTTGCAA
7	CGCATAGGTTGCCGATTTCGTCAA	TTGACGAAATCGGCAACCTATGCG
8	CCGTTTGCGGTCGTCCTTGCTCAA	TTGAGCAAGGACGACCGCAAACGG
9	TTCGCTTTCGTGGCTGCACTTCAA	TTGAAGTGCAGCCACGAAAGCGAA
10	GTCCAACGCGCAACTCCGATTCAA	TTGAATCGGAGTTGCGCGTTGGAC
11	TTGCCGCACCGTCCGTCATCTCAA	TTGAGATGACGGACGGTGCGGCAA
12	CATCGTCCCTTTCGATGGGATCAA	TTGATCCCATCGAAAGGGACGATG
13	GCACGGGAGCTGACGACGTGTCAA	TTGACACGTCGTCAGCTCCCGTGC
14	AGACGCACCGCAACAGGCTGTCAA	TTGACAGCCTGTTGCGGTGCGTCT
15	CGTGTAGGGGTCCCGTGCTGTCAA	TTGACAGCACGGGACCCCTACACG
16	CATCGCTGCAAGTACCGCACTCAA	TTGAGTGCGGTACTTGCAGCGATG
17	GGCTGGTTCGGCCCGAAAGCTTAG	CTAAGCTTTCGGGCCGAACCAGCC
18	GTTCCCAGTGAAGCTGCGATCTGG	CCAGATCGCAGCTTCACTGGGAAC
19	TACTTGGCATGGAATCCCTTACGC	GCGTAAGGGATTCCATGCCAAGTA
20	ACTAGCATATTTCAGGGCACCGGC	GCCGGTGCCCTGAAATATGCTAGT
21	GAACGGTCAATGAACCCGCTGTGA	TCACAGCGGGTTCATTGACCGTTC
22	GCGGCCTTGGTTCAATATGAATCG	CGATTCATATTGAACCAAGGCCGC
23	GATCGTTAGAGGGACCTTGCCCGA	TCGGGCAAGGTCCCTCTAACGATC
24	TGGACCTAGTCCGGCAGTGACGAA	TTCGTCACTGCCGGACTAGGTCCA
25	ATAAACTACCCAGGACGGGCGGAA	TTCCGCCCGTCCTGGGTAGTTTAT
26	CATCGGTTCGCGCCAATCCAGATA	TATCTGGATTGGCGCGAACCGATG
27	GTCGGGCATAGAGCCGACCACCCT	AGGGTGGTCGGCTCTATGCCCGAC
28	CTTGGGTCATGATTCACCGTGCTA	TAGCACGGTGAATCATGACCCAAG
29	TGCCTAACGTGCTAATCAGCAGCG	CGCTGCTGATTAGCACGTTAGGCA
30	CGCATGTTGGAGCATATGCCCTGA	TCAGGGCATATGCTCCAACATGCG
31	AGCCACTGCATCAGTGCTGTTCAA	TTGAACAGCACTGATGCAGTGGCT
32	GGTTGTTTTGAGGCGTCCCACACT	AGTGTGGGACGCCTCAAAACAACC
33	TCGACCAAGAGCAAGGGCGGACCA	TGGTCCGCCCTTGCTCTTGGTCGA
34	GACATCGCTATTGCGCATGGATCA	TGATCCATGCGCAATAGCGATGTC
35	GAAATACGAAGTCTGCGGGAGTCG	CGACTCCCGCAGACTTCGTATTTC
36	TGTCATGAATGATTGATCGCGCGA	TCGCGCGATCAATCATTCATGACA
37	ATATCGGGATTCGTTCCCGGTGAA	TTCACCGGGAACGAATCCCGATAT
38	GCGAGCGTACCGAAGGGCCTAGAA	TTCTAGGCCCTTCGGTACGCTCGC
39	TTACCGGCAGCGGACTTCCGAATT	AATTCGGAAGTCCGCTGCCGGTAA
40	GTAATCGAGAGCTGCGCGCGGTCT	AGACGGCGCGCAGCTCTCGATTAC
41	CCTGTTAGCGTAGGCGAGTCGATC	GATCGACTCGCGTACGCTAACAGG
42	TAGCGGACCGGCAGAATGAGTTCC	GGAACTCATTCTGCCGGTCCGCTA
43	GGTACATGCACTACGCGCACTCGG	CCGAGTGCGCGTAGTGCATGTACC
44	AATTCATCTCGGACTCCCGCGGTA	TACCGCGGGAGTCCGAGATGAATT
45	GCCAAATCTGGATTGGCAGGAATG	CATTCCTGCCAATCCAGATTTGGC
46	TGCATTTTCGGTTGAGGCACATCC	GGATGTGCCTCAACCGAAAATGCA
47	CCGCTCAATTCACCATGCTTCGCT	AGCGAAGCATGGTGAATTGAGCGG
48	CTCGGAAAGGTGCAACTTTGGTGT	ACACCAAAGTTGCACCTTTCCGAG
49	AATTCGACCAGCAGAACGTCCCAT	ATGGGACGTTCTGCTGGTCGAATT
50	GCCAGAGTCTCAACCTCACGGGAT	ATCCCGTGAGGTTGAGACTCTGGC
51	CCAACAACTGGAACGGGAACCCGC	GCGGGTTCCCGTTCCAGTTGTTGG
52	GAGAACTGATCGCTGAGGGGCATG	CATGCCCCTCAGCGATCAGTTCTC
53	GGCACACTAGACTTGTGGCACCGA	TCGGTGCCACAAGTCTAGTGTGCC
54	TCACATCCAAATATGGTCCGCGAA	TTCGCGGACCATATTTGGATGTGA
55	GTCTGCCGGTGTGACCGCTTCATT	AATGAAGCGGTCACACCGGCAGAC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
56	CATCGCAGAGCATAAACACCCTCA	TGAGGGTGTTTATGCTCTGCGATG
57	GTTGGTATCTATGGCAGAGGCGGA	TCCGCCTCTGCCATAGATACCAAC
58	ACGAGGTGCCGCTGAGGTTCCATT	AATGGAACCTCAGCGGCACCTCGT
59	GGAATGAGTGGACCCAGGCACATT	AATGTGCCTGGGTCCACTCATTCC
60	TGTCAATATGCGTCCGTGTCGTCT	AGACGACACGGACGCATATTGACA
61	TGATGAGCCTCAGGGTACGAGGCA	TGCCTCGTACCCTGAGGCTCATCA
62	CACCGCGGTGTTCCTACAGAATGA	TCATTCTGTAGGAACACCGCGGTG
63	TTGTTGCCAATGGTGTCCGCTCGG	CCGAGCGGACACCATTGGCAACAA
64	TTAACCTGCGTCTGCCCCTTTCCT	AGGAAAGGGGCAGACGCAGGTTAA
65	AGGCGCGTTCCTGCCTTAGTGACG	CGTCACTAAGGCAGGAACGCGCCT
66	TAGGGCGATGGCACGAAGCTTCAA	TTGAAGCTTCGTGCCATCGCCCTA
67	TGCATAGAGCCAAAGTCGGCGATG	CATCGCCGACTTTGGCTCTATGCA
68	TTGAGAGGCAGGTGGCCACACGGA	TCCGTGTGGCCACCTGCCTCTCAA
69	TCCGCATTGTGAGAAAAAACGAGC	GCTCGTTTTTTCTCACAATGCGGA
70	GGCGGTTTCCGTAGCTATAGGTGC	GCACCTATAGCTACGGAAACCGCC
71	GGTGAAAATTTCGTAGCCACGGGC	GCCCGTGGCTACGAAATTTTCACC
72	CCGACGGAGGATGAAGACAATCAC	GTGATTGTCTTCATCCTCCGTCGG
73	CCAGTTTGGCCCAATTCGCCAAAA	TTTTGGCGAATTGGGCCAAACTGG
74	GGATCTATTAGGCCGTGCGCACAG	CTGTGCGCACGGCCTAATAGATCC
75	CGGATGTCACCGTTTGGACTTTCA	TGAAAGTCCAAACGGTGACATCCG
76	ATCGCAAATCCTGCTCGTCCCTAA	TTAGGGACGAGCAGGATTTGCGAT
77	CAGGGCATGCAATAATCGAGGTTC	GAACCTCGATTATTGCATGCCCTG
78	CATGCGTTGATATATGGGCCCAAG	CTTGGGCCCATATATCAACGCATG
79	CAGCTGCAGCTTGTGACCAACCAC	GTGGTTGGTCACAAGCTGCAGCTG
80	TTGTATGTCTGCCGACCGGCGACC	GGTCGCCGGTCGGCAGACATACAA
81	GATGGCGCCCGTTGATAGGTATGG	CCATACCTATCAACGGGCGCCATC
82	ATGAGAATCGCCGGCAATCTGCTA	TAGCAGATTGCCGGCGATTCTCAT
83	ATTTGCACTGACCGCAGGCTCGTG	CACGAGCCTGCGGTCAGTGCAAAT
84	CAGGGAGAACGGTTAAGTTCCCGT	ACGGGAACTTAACCGTTCTCCCTG
85	AGGCCGGCGATCGAGGAGTTTGGT	ACCAAACTCCTCGATCGCCGGCCT
86	ACACGGTGGTCTCTGATAGCGACC	GGTCGCTATCAGAGACCACCGTGT
87	GTGCAACGCCGAGGACTTCCATCA	TGATGGAAGTCCTCGGCGTTGCAC
88	TCGGTGCCTGATAGCCATTCCGAT	ATCGGAATGGCTATCAGGCACCGA
89	TGAAATACCACACAGCCAATTGGC	GCCAATTGGCTGTGTGGTATTTCA
90	GCATCGTGTACATGACTGCCGCGA	TCGCGGCAGTCATGTACACGATGC
91	CAGTGTTCTAACGGCGCGCGTGAA	TTCACGCGCGCCGTTAGAACACTG
92	CGCTTGCAACGTTGCACCTACTCT	AGAGTAGGTGCAACGTTGCAAGCG
93	CGAAAAACTAGTGGGCTCGCCGCG	CGCGGCGAGCCCACTAGTTTTTCG
94	CTTTCAGGGGAACTGCCGGAGTCG	CGACTCCGGCAGTTCCCCTGAAAG
95	TTGTGGCCTTCTTGTAAAGGCACG	CGTGCCTTTACAAGAAGGCCACAA
96	TCCACGAACGGCGACCCGTTGTCT	AGACAACGGGTCGCCGTTCGTGGA
97	CGACCTTGCACGAAACCTAACGAG	CTCGTTAGGTTTCGTGCAAGGTCG
98	GTGCAGCTTCACGAGCCAGCCTGA	TCAGGCTGGCTCGTGAAGCTGCAC
99	CGCTTTCGTGCGAATAGACGATGA	TCATCGTCTATTCGCACGAAAGCG
100	TGCGCTTACAGGCTCCTAGTGGTC	GACCACTAGGAGCCTGTAAGCGCA
101	CACGCGCTTAGTCGCGATCGCATA	TATGCGATCGCGACTAAGCGCGTG
102	CGGAGGGAGGGAGCTAGCCTTCGA	TCGAAGGCTAGCTCCCTCCCTCCG
103	GCATCCGGCCTGTTGATGACGCCT	AGGCGTCATCAACAGGCCGGATGC
104	AGGCCAATCGATCTTATTGCCGAG	CTCGGCAATAAGATCGATTGGCCT
105	CCTTCCAATGATTGCATACGCCCA	TGGGCGTATGCAATCATTGGAAGG
106	AACACTTGATCAGGCGGGTCGTCT	AGACGACCCGCCTGATCAAGTGTT
107	TGGAATCAAGGCCGTAAAGGACAG	CTGTCCTTTACGGCCTTGATTCCA
108	GCTCCCGTAACCTGTCCACCAGTG	CACTGGTGGACAGGTTACGGGAGC
109	AGTGGTGAATGGCCGCTACCCTGA	TCAGGGTAGCGGCCATTCACCACT
110	TGTTGAAGCGAGCTAAAACGGCCA	TGGCCGTTTTAGCTCGCTTCAACA
111	CAGCGCTCCAGAATTGACAGCAAT	ATTGCTGTCAATTCTGGAGCGCTG
112	AAGGTGGTGCCATTCATTTGGCTA	TAGCCAAATGAATGGCACCACCTT
113	CGTTAAACCGCAATCCGTTCGGCT	AGCCGAACGGATTGCGGTTTAACG
114	CACGAGATACCGGCGTAAGGGTGG	CCACCCTTACGCCGGTATCTCGTG
115	CTACGGCAAACGTGTGGAATGGGT	ACCCATTCCACACGTTTGCCGTAG
116	GTAGGGCGATGACGGGCGAACTAC	GTAGTTCGCCCGTCATCGCCCTAC
117	AATCGACCTCCGCACACATTCGCA	TGCGAATGTGTGCGGAGGTCGATT
118	GAGTCAGCATGGCGGCGGAGATTC	GAATCTCCGCCGCCATGCTGACTC
119	AGATAAAGACGCTGGCAACACGGG	CCCGTGTTGCCAGCGTCTTTATCT
120	GGTACCTCAACGCGAACCACTTGT	ACAAGTGGTTCGCGTTGAGGTACC
121	AAGCGATGGCTACCCAAGAGCGAT	ATCGCTCTTGGGTAGCCATCGCTT
122	AGAGCTTATGCAGAACCAGGCGCC	GGCGCCTGGTTCTGCATAAGCTCT
123	ATCGGTCTCACGCAGGGTTGGATA	TATCCAACCCTGCGTGAGACCGAT
124	TAGGTTGCCCGCCAGAAGAAACAT	ATGTTTCTTCTGGCGGGCAACCTA
125	CGGTGCTGTTGCAAAAGCCTGTAG	CTACAGGCTTTTGCAACAGCACCG
126	TGATGAAAGTTTGCGGCAGGACAC	GTGTCCTGCCGCAAACTTTCATCA
127	GTTGAGTGCAGGATGCAGCGATAG	CTATCGCTGCATCCTGCACTCAAC
128	AACATTGCGCGGTCCACCAGGGTT	AACCCTGGTGGACCGCGCAATGTT
129	GGGCAGTTAGAGAGGGCCAGAAGT	ACTTCTGGCCCTCTCTAACTGCCC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
130	TCGAGCTGGTCCCCGTGAACGTGT	ACACGTTCACGGGGACCAGCTCGA
131	GTCTTGGGGGCCGCTTAGTGAAAA	TTTTCACTAAGCGGCCCCCAAGAC
132	ACTGTTGGCTTGCTCTCATGTCCA	TGGACATGAGAGCAAGCCAACAGT
133	AGGACCATTCGGAAGGCGAAGATA	TATCTTCGCCTTCCGAATGGTCCT
134	CTTGGGAGGCATCCGCTATAAGGA	TCCTTATAGCGGATGCCTCCCAAG
135	AATAAACGGAACGCACCGCTACAG	CTGTAGCGGTGCGTTCCGTTTATT
136	TTGTACGTGCGGTCCCCATAAGCA	TGCTTATGGGGACCGCACGTACAA
137	CGCACCAAACTGAGTTTCCCAGAC	GTCTGGGAAACTCAGTTTGGTGCG
138	ACCTGATCGTTCCCCTATTGGGAA	TTCCCAATAGGGGAACGATCAGGT
139	GGAACAGAGGCGAGGGGACTGAGC	GCTCAGTCCCCTCGCCTCTGTTCC
140	CCCTGCCTTGGCGTGTCGGCTTAT	ATAAGCCGACACGCCAAGGCAGGG
141	ACTCTGACACGCCAACTCCGGAAG	CTTCCGGAGTTGGCGTGTCAGAGT
142	CTGACGGTTTTCATTCGGCGTGCC	GGCACGCCGAATGAAAACCGTCAG
143	TGCGGTGGTTCATTGGAGCTGGCC	GGCCAGCTCCAATGAACCACCGCA
144	GCATGGCCAACTAGTGACTCGCAA	TTGCGAGTCACTAGTTGGCCATGC
145	AGGCCGTAAAGCGAATCTCACCTG	CAGGTGAGATTCGCTTTACGGCCT
146	CGAATATTATGCCGAGAATCCGCG	CGCGGATTCTCGGCATAATATTCG
147	ACAGACGAGCTCCCAACCACATGA	TCATGTGGTTGGGAGCTCGTCTGT
148	GGACGGTTTGTGCTGGATTGTCTG	CAGACAATCCAGCACAAACCGTCC
149	AAAGGCTATTGAGTTGGTTGGGCG	CGCCCAACCAACTCAATAGCCTTT
150	GATGGCCTATTCGGAGATCGGGCC	GGCCCGATCTCCGAATAGGCCATC
151	GATCCAGTAGGCAGCTTCATCCCA	TGGGATGAAGCTGCCTACTGGATC
152	AATAACTCGCGCGGGTATGCTTCT	AGAAGCATACCCGCGCGAGTTATT
153	GGAGGAGGTTTGTCTCGGAAAGCA	TGCTTTCCGAGACAAACCTCCTCC
154	CTTTGGTATGGCACATGCTGCCCG	CGGGCAGCATGTGCCATACCAAAG
155	AGAAAGGCTCGAGCAACGGGAACT	AGTTCCCGTTGCTCGAGCCTTTCT
156	AATCTACCGCACTGGTCCGCAAGT	ACTTGCGGACCAGTGCGGTAGATT
157	CGTGGCGGCCACAGTTTTTGGAGG	CCTCCAAAAACTGTGGCCGCCACG
158	TTGCAGTTCAATCCATACGCACGT	ACGTGCGTATGGATTGAAGTGCAA
159	GGCCCAAAGCCCCAGACCATTTTA	TAAAATGGTCTGGGGCTTTGGGCC
160	CGCCTGTCTTTGTCTCCGGACAAT	ATTGTCCGGAGACAAAGACAGGCG
161	TGAGGCAACAGGGGCCAAAAACTA	TAGTTTTTGGCCCCTGTTGCCTCA
162	AGCGGAAGTAGTCCTCGGCTCGTC	GACGAGCCGAGGACTACTTCCGCT
163	GGCCCCAAGGCTTAGAGATAGTGG	CCACTATCTCTAAGCCTTGGGGCC
164	GCACGTGAAGTTTAACCGCGATTC	GAATCGCGGTTAAACTTCACGTGC
165	AGCGGCAGAAACGTTCCTTGACGG	CCGTCAAGGAACGTTTCTGCCGCT
166	TCGTCGAGCAGACGAGATTGCACG	CGTGCAATCTCGTCTGCTCGACGA
167	TCTTTGCCGCGTAACTGACTGGTT	AAGCAGTCAGTTACGCGGCAAAGA
168	TTTATGTGCCAAGGGGTTAACCGA	TCGGTTAACCCCTTGGCACATAAA
169	TGTTACTGTGGTTCACGGCAGTCC	GGACTGCCGTGAACCACAGTAACA
170	CGCGCCTCGCTAGACCTTTTATTG	CAATAAAAGGTCTAGCGAGGCGCG
171	ACAAATGCGTGAGAGCTCCCAACT	AGTTGGGAGCTCTCACGCATTTGT
172	CGCGCAGATTATAGACCCGAATGT	ACATTCGGGTCTATAATCTGCGCG
173	CAAATAACGCCGCTGAATCGGCGT	ACGCCGATTCAGCGGCGTTATTTG
174	CCTTCGTGCATCGGTGATGATGTT	AACATCATCACCGATGCACGAAGG
175	TGAACACGAGCAACACTCCAACGC	GCGTTGGAGTGTTGCTCGTGTTCA
176	CAGCAGATCCTTCGTAGCGGTCGT	ACGACCGCTACGAAGGATCTGCTG
177	GGAACCTGGTGAGTTGTGCCTCAT	ATGAGGCACAACTCACCAGGTTCC
178	TCATAAGCGACAATCGCGGGCTTA	TAAGCCCGCGATTGTCGCTTATGA
179	CCCAACGTCACTGAAGCTCACAGT	ACTGTGAGCTTCAGTGACGTTGGG
180	TGTCAGAGCCCGCGACTCAGACGG	CCGTCTGAGTCGCGGGCTCTGACA
181	TACACGAAGCCTCTCCGTGGTCCA	TGGACCACGGAGAGGCTTCGTGTA
182	CTCAGAAGTCCTCGGCGAACTGGG	CCCAGTTCGCCGAGGACTTCTGAG
183	ATCCTTTTATCTACTCCGCGGCGA	TCGCCGCGGAGTAGATAAAAGGAT
184	AGGCGTGCAGCAACAGGATAAACC	GGTTTATCCTGTTGCTGCACGCCT
185	ACTCTCGAGGGAGTCTCTGGCACA	TGTGCCAGAGACTCCCTCGAGAGT
186	TTGCCAGGTCCATCGAGACCTGTT	AACAGGTCTCGATGGACCTGGCAA
187	TCCACTATAACTGCGGGTCCGTGT	ACACGGACCCGCAGTTATAGTGGA
188	GCCCAGTCGGCTCTAACAAGTTCG	CGAACTTGTTAGAGCCGACTGGGC
189	CGGAACGGATAATCGGCGTCAGGT	ACCTGACGCCGATTATCCGTTCCG
190	TAAAATAAGCGCCTGGCGGGAGGA	TCCTCCCGCCAGGCGCTTATTTTA
191	GCGCACTCGTGAAACCTTTCTCGC	GCGAGAAAGGTTTCACGAGTGCGC
192	AGTTTGCCAGGTACTGGCAAGTGC	GCACTTGCCAGTACCTGGCAAACT
193	ACAACGAGGGATGTCCAGCGGCAT	ATGCCGCTGGACATCCCTCGTTGT
194	TTCGCAGCACCCGCTAGGTACAGT	ACTGTACCTAGCGGGTGCTGCGAA
195	TAACCCGATTTTTGCGACTCTGCC	GGCAGAGTCGCAAAAATCGGGTTA
196	CGTCGCATTGCAAGCGTAGGCTTG	CAAGCCTACGCTTGCAATGCGACG
197	GAGCTGACGTCACCATCAGAGGAA	TTCCTCTGATGGTGACGTCAGCTC
198	GGAGGCTGGGGGTCGCGCTTAAGT	ACTTAAGCGCGACCCCCAGCCTCC
199	TTGTGGGAACCGCACTAGCTGGCT	AGCCAGCTAGTGCGGTTCCCACAA
200	CCCTCGCACTGTGTTCACCCTCTT	AAGAGGGTGAACACAGTGCGAGGG
201	TCATTGACTCGAATCCGCACAACG	CGTTGTGCGGATTCGAGTCAATGA
202	ACAGGGGTTGGCCTTCGTACGTAC	GTACGTACGAAGGCCAACCCCTGT
203	AGGCCGTGCAACATCACACAGGAT	ATCCTGTGTGATGTTGCACGGCCT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
204	GGGCCGTGGTCACGTAATATTGGC	GCCAATATTACGTGACCACGGCCC
205	GCGCGGACATGAAACGACAAGGCC	GGCCTTGTCGTTTCATGTCCGCGC
206	CTTATTGGGTGCCGGTGTCGGATT	AATCCGACACCGGCACCCAATAAG
207	GGGGCGGTTACCAAAAAATCCGAT	ATCGGATTTTTTGGTAACCGCCCC
208	GCTAAAGCGTGCTCCGTAACTGCC	GGCAGTTACGGAGCACGCTTTAGC
209	ATCTCATGCATCTCGGTTCGTCGT	ACGACGAACCGAGATGCATGAGAT
210	ACGAAAAAAGTGTGCGGATCCCCT	AGGGGATCCGCACACTTTTTTCGT
211	CCAAGTACACCGCACGCATGTTTA	TAAACATGCGTGCGGTGTACTTGG
212	ATCGTGCGTGGAGTGTCGCATCTA	TAGATGCGACACTCCACGCACGAT
213	TCCAGATACCGCCCCGAACTTTGA	TCAAAGTTCGGGGCGGTATCTGGA
214	TCTGCTGGCAGCACGTGAAGTGGC	GCCACTTCACGTGCTGCCAGCAGA
215	TTGAAATTGCTCTGCCGTCAGTCA	TGACTGACGGCAGAGCAATTTCAA
216	AGTCAGGCGAGATGTTCAGGCAGC	GCTGCCTGAACATCTCGCCTGACT
217	ACAAGCCGACGTTAAGCCCGCCCA	TGGGCGGGCTTAACGTCGGCTTGT
218	CCCTAATGAGGCCAGTAACCTGCA	TGCAGGTTACTGGCCTCATTAGGG
219	GTGAGACACACATCCCCTCCAATG	CATTGGAGGGGATGTGTGTCTCAC
220	CGACGGATGCAGAGTTCAGTGGTC	GACCACTGAACTCTGCATCCGTCG
221	CCCGCATGCCTGGCGGTATTACAA	TTGTAATACCGCCAGGCATGCGGG
222	TTAGCAAAGCGGCGCCGTTAGCAA	TTGCTAACGGCGCCGCTTTGCTAA
223	CCCGACACGGGTCAGCGTAATAAT	ATTATTACGCTGACCCGTGTCGGG
224	GCGACGGCCCTGAGGTATGTCGTC	GACGACATACCTCAGGGCCGTCGC
225	CAAAAGTGTGTTCCCTTGCGCTTG	CAAGCGCAAGGGAACACACTTTTG
226	TCTCGAAGCACAGCCCGGTTATTG	CAATAACCGGGCTGTGCTTCGAGA
227	ATGCTAACCGTTGGCCATGGAACT	AGTTCCATGGCCAACGGTTAGCAT
228	CTTGCGGAGTGTTAGCCCAGCGGT	ACCGCTGGGCTAACACTCCGCAAG
229	TGCTCCCTAGGCGCTCGGAGGAGT	ACTCCTCCGAGCGCCTAGGGAGCA
230	CCAATGCCTTTGAGTAAGCGATGG	CCATCGCTTACTCAAAGGCATTGG
231	AGCAGATAACGTCCCAATGACGCC	GGCGTCATTGGGACGTTATCTGCT
232	TTGACCATTACGTGTTGCGCCCAT	ATGGGCGCAACACGTAATGGTCAA
233	TCGCGTATTTGCGGAATTCGTCTG	CAGACGAATTCCGCAAATACGCGA
234	CTGCGTGTCAACAATGTCCCGCAG	CTGCGGGACATTGTTGACACGCAG
235	TCTGGTGCCACGCAAGGTCCACAG	CTGTGGACCTTGCGTGGCACCAGA
236	CTCCGGGAGGTCACTTAATTGCGG	CCGCAATTAAGTGACCTCCCGGAG
237	TTTTCGTGATTGCCCGGAGGAGGC	GCCTCCTCCGGGCAATCACGAAAA
238	TCGGGATGTAGCTGGGGCTACCGG	CCGGTAGCCCCAGCTACATCCCGA
239	CGAGCCAACGCAAACACGTCCTTG	CAAGGACGTGTTTGCGTTGGCTCG
240	GCAAAGCCTTTGTGGGGCGGTAGT	ACTACCGCCCCACAAAGGCTTTGC
241	ATTCGACCGGAAATGAGGTCTTCG	CGAAGACCTCATTTCCGGTCGAAT
242	TTCGCTTGCTGAGTTGCTCTGTTC	GAACAGAGCAACTCAGCAAGCGAA
243	CGCGTGAAGACCCCATTCCCGAGT	ACTCGGGAATGGGGTCTTCACGCG
244	AACCGTATTCGCGGTCACTTGTGG	CCACAAGTGACCGCGAATACGGTT
245	GGGGCCAACCGTTTCGAGGCGTAT	ATACGCCTCGAAACGGTTGGCCCC
246	TTCGGCTGGCAGTCCAAACGGCTT	AAGCCGTTTGGACTGCCAGCCGAA
247	GGGTGTGGTTAGAATGCACGGTTC	GAACCGTGCATTCTAACCACACCC
248	GCGAGGACCGAACTAGACAAACGG	CCGTTTGTCTAGTTCGGTCCTCGC
249	ACGCACGCGTGACCGAAGTTGCTG	CAGCAACTTCGGTCACGCGTGCGT
250	TAAAAGGTCGCTTTGAAAGGGGGA	TCCCCCTTTCAAAGCGACCTTTTA
251	TGCGATCGCTAACTGCTGGGACAA	TTGTCCCAGCAGTTAGCGATCGCA
252	GGAGGTATAAGCGGAGCGGCCTCA	TGAGGCCGCTCCGCTTATACCTCC
253	ATGCTGACATGTCGTGCACCTCGT	ACGAGGTGCACGACATGTCAGCAT
254	TGTGGTTAAAGCGTCCGTTCAACG	CGTTGAACGGACGCTTTAACCACA
255	CGTTCACACCGGCGTAAGCTGCGT	ACGCAGCTTACGCCGGTGTGAACG
256	CCTATCCCGGCGAGAACTTCTGTG	CACAGAAGTTCTCGCCGGGATAGG
257	GTCTGCACTCACGCAGCGGAGGGA	TCCCTCCGCTGCGTGAGTGCAGAC
258	GCACGAGTTGGTGCTCGGCAGATT	AATCTGCCGAGCACCAACTCGTGC
259	AACGTCGCACGACACACGTTCGTC	GACGAACGTGTGTCGTGCGACGTT
260	ATGCGCGCTTATCCTAGCATGGTC	GACCATGCTAGGATAAGCGCGCAT
261	TCACGTTTTCGTCTCGACATGAGG	CCTCATGTCGAGACGAAAACGTGA
262	TGTGCCTCATCCTTAGGATACGGC	GCCGTATCCTAAGGATGAGGCACA
263	AGGTGGTGTGGGTCAACCGCTTTA	TAAAGCGGTTGACCCACACCACCT
264	CTGGATCGAAGGGACTGCAAGCTC	GAGCTTGCAGTCCCTTCGATCCAG
265	TAGATCAACTCGCGTACGCATGGA	TCCATGCGTACGCGAGTTGATCTA
266	GATCCTGCGGAGAAGAGAGTGCAG	CTGCACTCTCTTCTCCGCAGGATC
267	TACGTGTGGAGATGCCCCGAACCG	CGGTTCGGGGCATCTCCACACGTA
268	GCGCTATGTCAATCGTGGGCGTAG	CTACGCCCACGATTGACATAGCGC
269	AGCGAGGTTTCTAGCGTCGACACC	GGTGTCGACGCTAGAAACCTCGCT
270	ACCCAGGTTTTGCCGTTGTGGAAT	ATTCCACAACGGCAAAACCTGGGT
271	CCCTGTTAACGGCTGCGTAGTCTC	GAGACTACGCAGCCGTTAACAGGG
272	AGGCCGATTTCACCCGCCAATTGC	GCAATTGGCGGGTGAAATCGGCCT
273	GAGCCCTCACTCCTTGCCCTTTGA	TCAAAGGGCAAGGAGTGAGGGCTC
274	GGGTGGACATCCGCCTCGCAGTCA	TGACTGCGAGGCGGATGTCCACCC
275	GATGGCTGAGAACCGTGCTACGAT	ATCGTAGCACGGTTCTCAGCCATC
276	TCGACGTTAGGAGTGCTGCCAGAA	TTCTGGCAGCACTCCTAACGTCGA
277	CGAATGGGTCTGGACCTTGCATAG	CTATGCAAGGTCCAGACCCATTCG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
278	GTGCACCAGACATTCGAACTCGGA	TCCGAGTTCGAATGTCTGGTGCAC
279	AGAGGCCCCGTATATCCCATCCAT	ATGGATGGGATATACGGGGCCTCT
280	AACGCCTGTTCAGAGCATCAGCGG	CCGCTGATGCTCTGAACAGGCGTT
281	AAGGCTCAACACGCCTATGTGCGC	GCGCACATAGGCGTGTTGAGCCTT
282	AGTCCGTGTTGCCAGATTGGCTCG	CGAGCCAATCTGGCAACACGGACT
283	ATGTCCCATGTAAAGACGCGTGTG	CACACGCGTCTTTACATGGGACAT
284	ATGGAGTCTGCTCACGCCCAAAGG	CCTTTGGGCGTGAGCAGACTCCAT
285	CGGCCTCCAACAAGGAGCACTAAC	GTTAGTGCTCCTTGTTGGAGGCCG
286	CAGAGCCGTGGCAACATTGCGAGC	GCTCGCAATGTTGCCACGGCTCTG
287	TCATTTGAATGAGGTGCGCACCGG	CCGGTGCGCACCTCATTCAAATGA
288	GACGTACCGGAAGCGCCGTATAAA	TTTATACGGCGCTTCCGGTACGTC
289	ATGCGAGCAATGGGATCCGGATTC	GAATCCGGATCCCATTGCTCGCAT
290	AGAGTGAGGCCTCCCTGACCAGTG	CACTGGTCAGGGAGGCCTCACTCT
291	CGCACCGTAAGTAGATTTGCCCGC	GCGGGCAAATCTACTTACGGTGCG
292	TGAACCTTTGAGCACGTCGTGCGC	GCGCACGACGTGCTCAAAGGTTCA
293	TCCGCCTTTTTGGTTACCTCGAAG	CTTCGAGGTAACCAAAAAGGCGGA
294	GAACGCCAACGGCACTAACACATC	GATGTGTTAGTGCCGTTGGCGTTC
295	CCGACAGCAGCCAAGACGTCCCAG	CTGGGACGTCTTGGCTGCTGTCGG
296	CATAAAAAAACCTGGGGCTCTGCG	CGCAGAGCCCCAGGTTTTTTTATG
297	TGCCAACTGTGCAGACCGGACTTA	TAAGTCCGGTCTGCACAGTTGGCA
298	GGCGAAAGAGCGAAACCGGCTCGT	ACGAGCCGGTTTCGCTCTTTCGCC
299	GGGATGCGTATTTTAGCGAACACG	CGTGTTCGCTAAAATACGCATCCC
300	TGGGATTCAGCGACCAGTACGCGA	TCGCGTACTGGTCGCTGAATCCCA
301	CCCGATATTCGCCCGGCCTATTCG	CGAATAGGCCGGGCGAATATCGGG
302	CGAGAAGATGCCTCACGCAACCAA	TTGGTTGCGTGAGGCATCTTCTCG
303	AACCTTGACCCGTGGATGACGCTA	TAGCGTCATCCACGGGTCAAGGTT
304	GGCTAGACGATGGATACCCGTGCC	GGCACGGGTATCCATCGTCTAGCC
305	GCCTCTTCTCGACGATGCGATTTT	AAAATCGCATCGTCGAGAAGAGGC
306	GCTTCCGGATGAACGGGATGGTTG	CAACCATCCCGTTCATCCGGAAGC
307	CCCTCCATGTTCTTCGAACGGTTT	AAACCGTTCGAAGAACATGGAGGG
308	TTGATGGGCGGCAATGCTCTTGCT	AGCAAGAGCATTGCCGCCCATCAA
309	ATTGTGAGATGCGCCAAATTCCCC	GGGGAATTTGGCGCATCTCACAAT
310	TCAGCACAGCCAGACGGTCAACTT	AAGTTGACCGTCTGGCTGTGCTGA
311	ACTCCACTCCTCGGTGGCAAACTA	TAGTTTGCCACCGAGGAGTGGAGT
312	TCTGGGCATGCCTGGACGGAGACG	CGTCTCCGTCCAGGCATGCCCAGA
313	TCTCAACTCCGGTACGACGAAACA	TGTTTCGTCGTACCGGAGTTGAGA
314	TTGCGTGGTCAAAGGCGCAACGTG	CACGTTGCGCCTTTGACCACGCAA
315	AGACAGCGATCCGCGGCTCATGAT	ATCATGAGCCGCGGATCGCTGTCT
316	CGCGTCTCTAACTGAGAGCAGCCA	TGGCTGCTCTCAGTTAGAGACGCG
317	AGGCGCACATGTACGGACATTCAG	CTGAATGTCCGTACATGTGCGCCT
318	GATGAGTGGCACGTCGGTGTGTAA	TTACACACCGACGTGCCACTCATC
319	TGATCCATATTGTCGGACGTTGCG	CGCAACGTCCGACAATATGGATCA
320	ACCTGCCGGGAGTTCATAGGCTAG	CTAGCCTATGAACTCCCGGCAGGT
321	AGCATTGGCGTTTTTCCGCAACGA	TCGTTGCGGAAAAACGCCAATGCT
322	GGTAATATTCAGCGCGACCGCTCA	TGAGCGGTCGCGCTGAATAYTACC
323	ATAGCGTACGACGAGGTGACGCGC	GCGCGTCACCTCGTCGTACGCTAT
324	TAGGTCACGATGCGTTTGACGCTA	TAGCGTCAAACGCATCGTGACCTA
325	ACTGCCCGTACCTCTGGTTCTGGC	GCCAGAACCAGAGGTACGGGCAGT
326	CCTTTGGCCTGAAGTTGTCGTAGC	GCTACGACAACTTCAGGCCAAAGG
327	GTGCCCCACGAGCGTATCGTTGTA	TACAACGATACGCTCGTGGGGCAC
328	AGGCGCTACGTGGGCCTGGAGCAA	TTGCTCCAGGCCCACGTAGCGCCT
329	GGGTGCTACCATTGCATTAGTCCG	CGGACTAATGCAATGGTAGCACCC
330	ACCACGCGCGTACGTGTAACCGAG	CTCGGTTACACGTACGCGCGTGGT
331	CCATGATGCATTGGGTGCATTTAG	CTAAATGCACCCAATGCATCATGG
332	GGTCCGGCCCTACGAAACGTTCGA	TCGAACGTTTCGTAGGGCCGGACC
333	CCGTGTGGCTGGAGATTCGTGTGA	TCACACGAATCTCCAGCCACACGG
334	GTTAGGGCGACGCATATTGGCACA	TGTGCCAATATGCGTCGCCCTAAC
335	GGGTCAGTCAGGTGCGTTAGGATC	GATCCTAACGCACCTGACTGACCC
336	GCCGTGAAGTCGAATGCAGATCGA	TCGATCTGCATTCGACTTCACGGC
337	GCCACCACCCAGTGCATTCAGGTA	TACCTGAATGCACTGGGTGGTGGC
338	GAGCTTAGTTTGCGGTCATCGGGC	GCCCGATGACCGCAAACTAAGCTC
339	TGTTTGCCGCCATTAGGGAGTAAC	GTTACTCCCTAATGGCGGCAAACA
340	GCTCCGCTGGATGTGCCGGTTTAG	CTAAACCGGCACATCCAGCGGAGC
341	CGGTAGCATGCGAGATCCCTGTTA	TAACAGGGATCTCGCATGCTACCG
342	CTACGCTCTACCAGTTGCCTGCGA	TCGCAGGCAACTGGTAGAGCGTAG
343	GTGCCTCCTGCTGTATTTGCCAAG	CTTGGCAAATACAGCAGGAGGCAC
344	TTGCGACTCGACTTGGACGAGTAG	CTACTCGTCCAAGTCGAGTCGCAA
345	TCTGGGAGCTGTTTACTCCAGCCA	TGGCTGGAGTAAACAGCTCCCAGA
346	TGCACGCGGAACTCCCTTTACCAT	ATGGTAAAGGGAGTTCCGCGTGCA
347	TGGCAGCAAATGAATCGAAAGCAC	GTGCTTTCGATTCATTTGCTGCCA
348	AACTGGTGACGCGGTACAGCGAAG	CTTCGCTGTACCGCGTCACCAGTT
349	AGACGATTACGCTGGACGCCGTCG	CGACGGCGTCCAGCGTAATCGTCT
350	ATGCCCTCCTTCATGGAAAGGGTT	AACCCTTTCCATGAAGGAGGGCAT
351	ATTCTCGGAGCGTATGCGCCAGAA	TTCTGGCGCATACGCTCCGAGAAT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
352	ATAGCGGAGTTTGGGTACGCGAAC	GTTCGCGTACCCAAACTCCGCTAT
353	ACCTACGCATACCGCTTGGCGAGG	CCTCGCCAAGCGGTATGCGTAGGT
354	GATTACCTGAATGGCCAAGCGAGC	GCTCGCTTGGCCATTCAGGTAATC
355	CCTGTTAGCATCACGGCGCTTAGG	CCTAAGCGCCGTGATGCTAACAGG
356	CGGAATGATGCGCTCGACAACGCT	AGCGTTGTCGAGCGCATCATTCCG
357	TGAGAGAGGCGTTGGTTAAGGCAA	TTGCCTTAACCAACGCCTCTCTCA
358	AAGCAGGCGAAGGGATACTCCTCG	CGAGGAGTATCCCTTCGCCTGCTT
359	TCACGACAGACGGGCCGAGATTAC	GTAATCTCGGCCCGTCTGTCGTGA
360	AAGCAATTTGGCCTCGTTTTGTGA	TCACAAAACGAGGCCAAATTGCTT
361	GCTGGTTGCGGTAGGATCGCATAT	ATATGCGATCCTACCGCAACCAGC
362	TTGTGAATCCGTTCTGTCCCCGAC	GTCGGGGACAGAACGGATTCACAA
363	TGGGCTCCTCTGAGGCGAGATGGC	GCCATCTCGCCTCAGAGGAGCCCA
364	GGATAGAGTGAATCGACCGGCAAC	GTTGCCGGTCGATTCACTCTATCC
365	TGCACCGAACGTGCACGAGTAATT	AATTACTCGTGCACGTTCGGTGCA
366	GCCAGTATTCTCGGGTGTTGGACG	CGTCCAACACCCGAGAATACTGGC
367	TCGCTACCTAAGACCGGGCCATAC	GTATGGCCCGGTCTTAGGTAGCGA
368	TGGCATTGACGAGCAGCAGTCAGT	ACTGACTGCTGCTCGTCAATGCCA
369	CGCGTCCCAGCGCCCTTGGAGTAT	ATACTCCAAGGGCGCTGGGACGCG
370	ATGAAGCCTACCGGGCGACTTCGT	ACGAAGTCGCCCGGTAGGCTTCAT
371	CCAGACAGATGGCCTGGAACCATG	CATGGTTCCAGGCCATCTGTCTGG
372	TGGCGTGGGACCATCTCAAAGCTA	TAGCTTTGAGATGGTCCCACGCCA
373	CCGCATGGGAACACGTGTCAAGGT	ACCTTGACACGTGTTCCCATGCGG
374	GCCCACTCGTCAGCTGGACGTAAT	ATTACGTCCAGCTGACGAGTGGGC
375	ATTACGGTCGTGATCCAGAAAGCG	CGCTTTCTGGATCACGACCGTAAT
376	TGCGAGGTGAGCACCTACGAGAGA	TCTCTCGTAGGTGCTCACCTCGCA
377	GGGCCGCATTCTTGATGTCCATTC	GAATGGACATCAAGAATGCGGCCC
378	CCTCGGATGTGGGCTCTCGCCTAG	CTAGGCGAGAGCCCACATCCGAGG
379	TAGGCATGTTGGCGTGAGCGCTAT	ATAGCGCTCACGCCAACATGCCTA
380	CGATACGAACGAGGATGTCCGCCT	AGGCGGACATCCTCGTTCGTATCG
381	TACGCCGGTTAGCACGGTGCGCTA	TAGCGCACCGTGCTAACCGGCGTA
382	CATACGATGTCCGGGCCGTGTCGC	GCGACACGGCCCGGACATCGTATG
383	ATCCGCAGTTGTATGGCGCGTTAT	ATAACGCGCCATACAACTGCGGAT
384	GGGTAAGGGACAAAGATGGGATGG	CCATCCCATCTTTGTCCCTTACCC
385	ATTGGAGTGTTTTGGTGAATCCGC	GCGGATTCACCAAAACACTCCAAT
386	GAACCGAGCCAACGTATGGACACG	CGTGTCCATACGTTGGCTCGGTTC
387	GCCGTCAAGCTTAAGGTTTTGGGC	GCCCAAAACCTTAAGCTTGACGGC
388	ACCTGCTTTTGGGTGGGTGATATG	CATATCACCCACCCAAAAGCAGGT
389	AATCGTGGGCGCAGCAAACGTATA	TATACGTTTGCTGCGCCCACGATT
390	GTCGCCGGATTGCTCAGTATAAGC	GCTTATACTGAGCAATCCGGCGAC
391	ACCCGTCGATGCTTCCTCCTCAGA	TCTGAGGAGGAAGCATCGACGGGT
392	ATCCGGGTGGGCGATACAAGAGAT	ATCTCTTGTATCGCCCACCCGGAT
393	TTCCGCATGAGTCAGCTTTGAAAA	TTTTCAAAGCTGACTCATGCGGAA
394	GCAAAGTCCCACTGGCAAGCCGAT	ATCGGCTTGCCAGTGGGACTTTGC
395	CGACCTCGGCTTCATCGTACACAT	ATGTGTACGATGAAGCCGAGGTCG
396	CTCATGAGCGCAGTTGTGCGTGAG	CTCACGCACAACTGCGCTCATGAG
397	CAGATGAAGGATCCACGGCCGGAG	CTCCGGCCGTGGATCCTTCATCTG
398	TCAAAGGCTCTTGGATACAGCCGT	ACGGCTGTATCCAAGAGCCTTTGA
399	TCCGCTAATTTCCAATCAGGGCTC	GAGCCCTGATTGGAAATTAGCGGA
400	ACGCACGGCGCTTTTGCCTTAATG	CATTAAGGCAAAAGCGCCGTGCGT
401	TGACAACGTCACAAGGAGCAGGAC	GTCCTGCTCCTTGTGACGTTGTCA
402	CTTAGTTGGGGCGCGGTATCCAGA	TCTGGATACCGCGCCCCAACTAAG
403	GCTCTAATGCCGTGGAGTCGGAAC	GTTCCGACTCCACGGCATTAGAGC
404	CCGATTACAAATTGACTGACCGCA	TGCGGTCAGTCAATTTGTAATCGG
405	AGACGTACGTGAGCCTCCCGTGTC	GACACGGGAGGCTCACGTACGTCT
406	AATGGAGCGATACGATCCAACGCA	TGCGTTGGATCGTATCGCTCCATT
407	GGAGGCGCTGTACTGATAGGCGTA	TACGCCTATCAGTACAGCGCCTCC
408	TGTTTTTGAATTGACCACACGGGA	TCCCGTGTGGTCAATTCAAAAACA
409	CATGTCTGGATGCGCTCAATGAAG	CTTCATTGAGCGCATCCAGACATG
410	GCCCGCTAATCCGACACCCAGTTT	AAACTGGGTGTCGGATTAGCGGGC
411	CCATTGACAGGAGAGCCATGAGCC	GGCTCATGGCTCTCCTGTCAATGG
412	GAATCACCGAATCACCGACTCGTT	AACGAGTCGGTGATTCGGTGATTC
413	AACCAGCCGCAGTAGCTTACGTCG	CGACGTAAGCTACTGCGGCTGGTT
414	TTTTCTGAGGGACACGCGGGCGTT	AACGCCCGCGTGTCCCTCAGAAAA
415	GGTGCTCCGTTTGATCGATCCTCC	GGAGGATCGATCAAACGGAGCACC
416	CCGCTTAGGCCATACTCTGAGCCA	TGGCTCAGAGTATGGCCTAAGCGG
417	TAAGACATACCGACGCCCTTGCCT	AGGCAAGGGCGTCGGTATGTCTTA
418	GTTCCCGACGCCAGTCATTGAGAC	GTCTCAATGACTGGCGTCGGGAAC
419	TAAAAGTTTCGCGGAGGTCGGGCT	AGCCCGACCTCCGCGAAACTTTTA
420	CGGTCCAGACGAGCTGAGTTCGGC	GCCGAACTCAGCTCGTCTGGACCG
421	CGGCGTAGCGGCTACGGACTTAAA	TTTAAGTCCGTAGCCGCTACGCCG
422	GCTTGGATGCCCATGCGGCAAGGT	ACCTTGCCGCATGGGCATCCAAGC
423	AGCGGGATCCCAGAGTTTCGAAAA	TTTTCGAAACTCTGGGATCCCGCT
424	GAGCTTGAGAGCGAGGTCATCCTC	GAGGATGACCTCGCTCTCAAGGTC
425	GCATCGGCCGTTTTGACCATATTC	GAATATGGTCAAAACGGCCGATGC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
426	CATAGCGCTGCACGTTTCGACCGC	GCGGTCGAAACGTGCAGCGCTATG
427	ACCCGACAACCACCAATTCAAAAA	TTTTTGAATTGGTGGTTGTCGGGT
428	GCGAACACTCATAAGAGCGCCCTG	CAGGGCGCTCTTATGAGTGTTCGC
429	CCGCCGAGTGTAGAGAGACTCCGA	TCGGAGTCTCTCTACACTCGGCGG
430	GACATCGGGAGCCGGAAACATGAG	CTCATGTTTCCGGCTCCCGATGTC
431	TCGTGTAGACTCGGCGACAGGCGT	ACGCCTGTCGCCGAGTCTACACGA
432	ATGCGCATATACTGACTGCGCAGG	CCTGCGCAGTCAGTATATGCGCAT
433	ACAAGCGAACCCGAGTTTTGATGA	TCATCAAAACTCGGGTTCGCTTGT
434	GCATGAGACTCCGCGAAGACATGT	ACATGTCTTCGCGGAGTCTCATGC
435	TCCTACATGTCGCGTCACGATCAC	GTGATCGTGACGCGACATGTAGGA
436	GACCGATCGCGAAGTCGTACACAT	ATGTGTACGACTTCGCGATCGGTC
437	GTCGCCAGGACTGGGCCGATGTGA	TCACATCGGCCCAGTCCTGGCGAC
438	ACCGATAAGACTTGCATCCGAACG	CGTTCGGATGCAAGTCTTATCGGT
439	TCCATAACCAGTCCGAAGTGCCGG	CCGGCACTTCGGACTGGTTATGGA
440	ACGCGCCCTGCATCTCGTATTTAA	TTAAATACGAGATGCAGGGCGCGT
441	AGACCGCATCAATTGGCGCGTACC	GGTACGCGCCAATTGATGCGGTCT
442	AGAGGCTTGGCAAGTAGGGACCCT	AGGGTCCCTACTTGCCAAGCCTCT
443	GCAATGGACGCCAGACGATACCGG	CCGGTATCGTCTGGCGTCCATTGC
444	GCTGGACTTAGTCGTGTTCGGCGG	CCGCCGAACACGACTAAGTCCAGC
445	AGGCATCGTGCCGGATTGCTCCCT	AGGGAGCAATCCGGCACGATGCCT
446	TGCGCATGTCGACGTTGAACAAAG	CTTTGTTCAACGTCGACATGCGCA
447	TTCGGGTCACATCCGATGCCATAC	GTATGGCATCGGATGTGACCCGAA
448	ACCCATCGCCGGAAAGCGATGTTG	CAACATCGCTTTCCGGCGATGGGT
449	AAGCGCTGACTCGGCTAAGAATCA	TGATTCTTAGCCGAGTCAGCGCTT
450	ACTTCCAAGTCCTTGACCGTCCGA	TCGGACGGTCAAGGACTTGGAAGT
451	TCTCAATATTCCCGTAGTCGCCCA	TGGGCGACTACGGGAATATTGAGA
452	AACAGTTCCTCTTTTTCCTGGCGC	GCGCCAGGAAAAAGAGGAACTGTT
453	CGTCCTCCATGTTGTCACGAACAG	CTGTTCGTGACAACATGGAGGACG
454	TGCGCAGACCTACCTGTCTTTGCT	AGCAAAGACAGGTAGGTCTGCGCA
455	ATGGACGGCTTCGCAGTCCTCCTT	AAGGAGGACTGCGAAGCCGTCCAT
456	TGAACGCTTTCTATGGGCCACGTA	TACGTGGCCCATAGAAAGCGTTCA
457	TGAACCCTGCCGCGAGCGATAACC	GGTTATCGCTCGCGGCAGGGTTCA
458	GTTCTTGCGCGATGAATCAGGACC	GGTCCTGATTCATCGCGCAAGAAC
459	AGGGTACGTGTCGCAGCTTCGCGT	ACGCGAAGCTGCGACACGTACCCT
460	ACCCTTGCTCCGCCATGTCTCTCA	TGAGAGACATGGCGGAGCAAGGGT
461	GGGACAAGGATTGAAGCTGGCGTC	GACGCCAGCTTCAATCCTTGTCCC
462	TGTCGTTGCTCCCGAGTACCATTG	CAATGGTACTCGGGAGCAACGACA
463	GTTGTCCGAGACGTTTGTGTCAGC	GCTGACACAAACGTCTCGGACAAC
464	GCTGGTGAACACTCACGAACCGCT	AGCGGTTCGTGAGTGTTCACCAGC
465	GCAGACAGGGCAAATCGGTGCAAA	TTTGCACCGATTTGCCCTGTCTGC
466	CCCATCACAACGAGTGGCGACTTT	AAAGTCGCCACTCGTTGTGATGGG
467	GCTTCTACAGCTGGCGTGCTAGCG	CGCTAGCACGCCAGCTGTAGAAGC
468	GAATGTGTGCCGACCATTCTAGCC	GGCTAGAATGGTCGGCACACATTC
469	CCAGCGGAAGTTAGAGCTCTGTGG	CCACAGAGCTCTAACTTCCGCTGG
470	TTTTTACCGACCACTCCATGTCGG	CCGACATGGAGTGGTCGGTAAAAA
471	GCGGCTATGTGATGACGGCCTAGC	GCTAGGCCGTCATCACATAGCCGC
472	AGTACACGGGCGTGTTAGCGCTCC	GGAGCGCTAACACGCCCGTGTACT
473	TCCTGTGTGGTGGCGCACTCCCAC	GTGGGAGTGCGCCACCACACAGGA
474	CCAACTAACCAATCGCGCGGATGA	TCATCCGCGCGATTGGTTAGTTGG
475	AGTGAGTGACCAAGGCAGGAGCAA	TTGCTCCTGCCTTGGTCACTCACT
476	CATCTTTCGCGGAGTTTATTGCGG	CCGCAATAAACTCCGCGAAAGATG
477	CTTCGTCCGGTTAGTGCGACAGCA	TGCTGTCGCACTAACCGGACGAAG
478	CTCACGAAAACGTGGGCCCGAAAT	ATTTCGGGCCCACGTTTTCGTGAG
479	CGCAGCAGCTGAACTCTAGCATTG	CAATGCTAGAGTTCAGCTGCTGCG
480	AGGAGACATACGCCCAAATGGTGC	GCACCATTTGGGCGTATGTCTCCT
481	ATTGAGAACTCGTGCGGGAGTTTG	CAAACTCCCGCACGAGTTCTCAAT
482	CTCTTTGTAGGCCCAGGAGGAGCA	TGCTCCTCCTGGGCCTACAAAGAG
483	GCCGCAGGGTCGATAATTGGTCTA	TAGACCAATTATCGACCCTGCGGC
484	AAACGCCGCCCTGAGACTATTGGG	CCCAATAGTCTCAGGGCGGCGTTT
485	CTGAGTTGCCTGGAACGTTGGACT	AGTCCAACGTTCCAGGCAACTCAG
486	CGGATGGGTTGCAGAGTATGGGAT	ATCCCATACTCTGCAACCCATCCG
487	CTGACCTTTGGGGGTTAGTGCGGT	ACCGCACTAACCCCCAAAGGTCAG
488	GGAAATGAGAACCTTACCCCAGCG	CGCTGGGGTAAGGTTCTCATTTCC
489	AACGCATCGTCCGTCAACTCATCA	TGATGAGTTGACGGACGATGCGTT
490	TGGAGAGAGACTTCGGCCATTGTT	AACAATGGCCGAAGTCTCTCTCCA
491	TTGCGCTCATTGGATCTTGTCAGG	CCTGACAAGATCCAATGAGCGCAA
492	AGCGCGTTAAAGCACGGCAACATT	AATGTTGCCGTGCTTTAACGCGCT
493	AGCCAGTAAACTGTGGGCGGCTGT	ACAGCCGCCCACAGTTTACTGGCT
494	CGACTGATGTGCAACCAGCAGCTG	CAGCTGCTGGTTGCACATCAGTCG
495	GGTTGCTCATACGACGAGCGAGTG	CACTCGCTCGTCGTATGAGCAACC
496	GCGCAAATCCACGGAACCCGTACC	GGTACGGGTTCCGTGGATTTGCGC
497	ACGCAGTTTATTCCCCTGGCTTCT	AGAAGCCAGGGGAATAAACTGCGT
498	AGAACCTCCGCGCCTCCGTAGTAG	CTACTACGGAGGCGCGGAGGTTCT
499	AAAGGAGCTTTCGCCCAACGTACC	GGTACGTTGGGCGAAAGCTCCTTT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
500	AGTGATTGTGCCACTCCACAGCTC	GAGCTGTGGAGTGGCACAATCACT
501	GCGATCGTCGAGGGTTGAGCTGAA	TTCAGCTCAACCCTCGACGATCGC
502	GGGAGACAGCCATTATGGTCCTCG	CGAGGACCATAATGGCTGTCTCCC
503	GAGACGCTGTCACTCCGGCAGAAC	GTTCTGCCGGAGTGACAGCGTCTC
504	CCACCGGTCGCTTAAGATGCACTT	AAGTGCATCTTAAGCGACCGGTGG
505	CGGCATAACGTCCAGTCCTGGGAC	GTCCCAGGACTGGACGTTATGCCG
506	AAGCGGAACGGGTTATACCGAGGT	ACCTCGGTATAACCCGTTCCGCTT
507	TGCACACTAGGTCCGTCGCTTGAT	ATCAAGCGACGGACCTAGTGTGCA
508	AGGGAACCGCGTTCAAACTCAGTT	AACTGAGTTTGAACGCGGTTCCCT
509	GAATTACAACCACCCGCTCGTGTT	AACACGAGCGGGTGGTTGTAATTC
510	TTCAGTGCTCACGAAGCATGGATT	AATCCATGCTTCGTGAGCACTGAA
511	TTAGTTTGGCGTTGGGACTTCACC	GGTGAAGTCCCAACGCCAAACTAA
512	AATGCGACCTCGACGAGCCTCATA	TATGAGGCTCGTCGAGGTCGCATT
513	CCGAAACCGTTAACGTGGCGCACA	TGTGCGCCACGTTAACGGTTTCGG
514	TAAAGTAACAAGGCGACCTCCCGC	GCGGGAGGTCGCCTTGTTACTTTA
515	TAATGATTTTAGTCGCGGGGTGGG	CCCACCCCGCGACTAAAATCATTA
516	GGCTACTCTAAGTGCCCGCTCAGG	CCTGAGCGGGCACTTAGAGTAGCC
517	TGGCGGACGACTCAATATCTCACG	CGTGAGATATTGAGTCGTCCGCCA
518	GGGCGTTAGGCGTAATAGACCGTC	GACGGTCTATTACGCCTAACGCCC
519	GCCACCTTTAGACGGCGGCTCTAG	CTAGAGCCGCCGTCTAAAGGTGGC
520	GAGATGTGTAAACGTGCAGGCACC	GGTGCCTGCACGTTTACACATCTC
521	TAGCTCGTGGCCCTCCAAGCGTGT	ACACGCTTGGAGGGCCACGAGCTA
522	GTGTCGGCGCTATTTGGCCTTACC	GGTAAGGCCAAATAGCGCCGACAC
523	CCAGGGAAGCAACTGGTTGCCATT	AATGGCAACCAGTTGCTTCCCTGG
524	TTCCGAAACTAAGCCAGAACCGCT	AGCGGTTCTGGCTTAGTTTCGGAA
525	GCAAACCCGGTAACCCGAGAGTTC	GAACTCTCGGGTTACCGGGTTTGC
526	GCAAATGGCGTCATGCACGAACGT	ACGTTCGTGCATGACGCCATTTGC
527	AGTACTTTCGCGCCCAGTTTAGGG	CCCTAAACTGGGCGCGAAAGTACT
528	AAGATCTGCGAGGCATCCCGGCTT	AAGCCGGGATGCCTCGCAGATCTT
529	GCAAGTGTATCGCACAGTGCGATT	AATCGCACTGTGCGATACACTTGC
530	CCGACAAGGCCTCAATTCATTCTG	CAGAATGAATTGAGGCCTTGTCGG
531	GTCTCGTCTCAACTTTAAGGCGCG	CGCGCCTTAAAGTTGAGACGAGAC
532	ATCCAGAGATCCGTTTTGCAGCGT	ACGCTGCAAAACGGATCTCTGGAT
533	GTCACCAGGAGGGAAGTTTCACCC	GGGTGAAACTTCCCTCCTGGTGAC
534	TTCCGTCAGGCGGATCAACGGAAT	ATTCCGTTGATCCGCCTGACGGAA
535	ATGCCGGACACGCATTACACAGGC	GCCTGTGTAATGCGTGTCCGGCAT
536	TGGGCCGCTTGGCGCTTTCATAGA	TCTATGAAAGCGCCAAGCGGCCCA
537	CCTAGCGCGAGCTTTACTGACCAG	CTGGTCAGTAAAGCTCGCGCTAGG
538	TTGGCCAGGAATATGGTCTCGAGA	TCTCGAGACCATATTCCTGGCCAA
539	GTCTGCGGCCGACTTGCTATGCAT	ATGCATAGCAAGTCGGCCGCAGAC
540	AACTTGCTCATTCTCAAGCCGACG	CGTCGGCTTGAGAATGAGCAAGTT
541	ACGTCAGCGATTGTGGCGAAATAT	ATATTTCGCCACAATCGCTGACGT
542	ACGGCCTGCGTCAGCACATGCATC	GATGCATGTGCTGACGCAGGCCGT
543	ATACCTCCGCAGAACCATTCCGTT	AACGGAATGGTTCTGCGGAGGTAT
544	AGTTCGCGGTCCCACGATTCACTT	AAGTGAATCGTGGGACCGCGAACT
545	TGCTCAATTTGTGCAGAAAACGCC	GGCGTTTTCTGCACAAATTGAGCA
546	TTATCGCGAGAGACGACCGTGTCC	GGACACGGTCGTCTCTCGCGATAA
547	GACGCGACGTGAGTAGTGGAAGCG	CGCTTCCACTACTCACGTCGCGTC
548	ATGGTAGGGGCATTGGGCTTTCCT	AGGAAAGCCCAATGCCCCTACCAT
549	CCAAATATAGCCGCGCGGAGACAT	ATGTCTCCGCGCGGCTATATTTGG
550	GCAAACCCTGATTGAATCGTGCCC	GGGCACGATTCAATCAGGGTTTGC
551	TAGCGTCTTGCGTGAAACCATGGG	CCCATGGTTTCACGCAAGACGCTA
552	CCACCCCGACAGCGCTGGACTCTT	AAGAGTCCAGCGCTGTCGGGGTGG
553	ACGAGCACTGAAGGCTGCTTTACG	CGTAAAGCAGCCTTCAGTGCTCGT
554	CATATCAGCGTCGTCTAGCTCGCG	CGCGAGCTAGACGACGCTGATATG
555	TGATCCCGGACCGGCTAGACTAAT	ATTAGTCTAGCCGGTCCGGGATCA
556	GGCCCCGACACTACAGGGTAATCA	TGATTACCCTGTAGTGTCGGGGCC
557	GGCTCCAGGGCGAGATTATGAATG	CATTCATAATCTCGCCCTGGAGCC
558	CAAAATCCGATGGGCGGAAAATTA	TAATTTTCCGCCCATCGGATTTTG
559	CACAGGCGCATAGGGAGCAAGCTA	TAGCTTGCTCCCTATGCGCCTGTG
560	TAGCTATTTGCCCCGATGGGCTAC	AGTAGCCCATCGGGGCAATAGCTA
561	TGGTACGCGGTCCATAGCAAGTCG	CGACTTGCTATGGACCGCGTACCA
562	GACGCTGTGGCTCGGAAACTGTTC	GAACAGTTTCCGAGCCACAGCGTC
563	CCTGGGTTCGCCGCGTGGTAACTG	CAGTTACCACGCGGCGAACCCAGG
564	TTCCCGCGTAGCCCAACAGCTATA	TATAGCTGTTGGGCTACGCGGGAA
565	TTCGCGGATTGCTGCCGCATAACA	TGTTATGCGGCAGCAATCCGCGAA
566	AAAAATGGCACCGAAGTTGAGGCA	TGCCTCAACTTCGGTGCCATTTTT
567	CATTCCGCGCGAGTTGAAATCCAG	CTGGATTTCAACTCGCGCGGAATG
568	ACGCACGTTTTTTGGCACGGTTAA	TTAACCGTGCCAAAAAACGTGCGT
569	TGTCCATGACGTCGTTTCTCTGGT	ACCAGAGAAACGACGTCATGGACA
570	TCTCAGTCGGACTCGTATGCCAGA	TCTGGCATACGAGTCCGACTGAGA
571	CTCCAAACGCACACATCAAGCATC	GATGCTTGATGTGTGCGTTTGGAG
572	TTCAACCAAGGGGGGTGTTCGTGA	TCACGAACACCCCCCTTGGTTGAA
573	GGTGTCGGAGGGTGGTGACCTCGA	TCGAGGTCACCACCCTCCGACACC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
574	AGCGCTTTTGGTCATGATTTGCAA	TTGCAAATCATGACCAAAAGCGCT
575	CCGAGGACTTACGTCTGCCCAGGA	TCCTGGGCAGACGTAAGTCCTCGG
576	GCCCAATCCAGTTCTTATGCGCCC	GGGCGCATAAGAACTGGATTGGGC
577	CGGGTTAACCCACGCAAGTTATGA	TCATAACTTGCGTGGGTTAACCCG
578	TGATTAGCGCTCAATACACGCGTG	CACGCGTGTATTGAGCGCTAATCA
579	AAGGGCAGACCTTTGGTTCGACTG	CAGTCGAACCAAAGGTCTGCCCTT
580	GCGCCACAAGATTCACATGTCATT	AATGACATGTGAATCTTGTGGCGC
581	GCCATGTTCAAGGGCCTTTCGAAG	CTTCGAAAGGCCCTTGAACATGGC
582	CGCGGTGTTTTGTCTAGGTGCCGG	CCGGCACCTAGACAAAACACCGCG
583	CAACATTGTGGTGGCACTCCATCC	GGATGGAGTGCCACCACAATGTTG
584	CGATACGCGCCGGTTTGTTAAATC	GATTTAACAAACCGGCGCGTATCG
585	GGCTATAAACGTGCGGACTGCTCC	GGAGCAGTCCGCACGTTTATAGCC
586	TGGGTAAATCACTATTGCGCGGTT	AACCGCGCAATAGTGATTTACCCA
587	GTCTTCATCGGCCCGCGCAAGCTA	TAGCTTGCGCGGGCCGATGAAGAC
588	GCGACACACCCTGTACTCTGATGC	GCATCAGAGTACAGGGTGTGTCGC
589	GTAGCAGGGTCCGCAAGACCAAGC	GCTTGGTCTTGCGGACCCTGCTAC
590	TCGCCAACGCAGGGTAACTGCCAT	ATGGCAGTTACCCTGCGTTGGCGA
591	ACTCCGAAGCTTCGAGCGGCACGA	TCGTGCCGCTCGAAGCTTCGGAGT
592	TCCCGCCCACTAGACTGACTCGTA	TACGAGTCAGTCTAGTGGGCGGGA
593	ACCTTCTGGGGTCGCTCACCAATA	TATTGGTGAGCGACCCCAGAAGGT
594	ATCATCCCACGGCAGAGTGAAGAG	CTCTTCACTCTGCCGTGGGATGAT
595	CGCTGGACTGGCCTATCCGAGTCG	CGACTCGGATAGGCCAGTCCAGCG
596	CGGTCTCAGCAACACTGTCGCAAA	TTTGCGACAGTGTTGCTGAGACCG
597	CGAACGTTCTCCGATGTAATGGCC	GGCCATTACATCGGAGAACGTTCG
598	ATACCGTGCGACAAGCCCCTCTGA	TCAGAGGGGCTTGTCGCACGGTAT
599	AGCTCATTCCCGAGACGGAACACC	GGTGTTCCGTCTCGGGAATGAGCT
600	TTTCATGCGGCCGTTGCAAATCAT	ATGATTTGCAACGGCCGCATGAAA
601	ACTCGAACGGACGTTCAATTCCCA	TGGGAATTGAACGTCCGTTCGAGT
602	CTGCATGGTGTGGGTGAGACTCCC	GGGAGTCTCACCCACACCATGCAG
603	CCGCGAGTGTGGATGGCGTGTTGA	TCAACACGCCATCCACACTCGCGG
604	AATGTGTCGGTCCTAAGCCGGGTG	CACCCGGCTTAGGACCGACACATT
605	TAAGACGAGCCTGCACAGCTTGCG	CGCAAGCTGTGCAGGCTCGTCTTA
606	GGCGTGGGAGGATAAGACGATGTC	GACATCGTCTTATCCTCCCACGCC
607	TGCTCCATGTTAGGAACGCACCAC	GTGGTGCGTTCCTAACATGGAGCA
608	CGGTGTTGGTCGGACTGACGACTG	CAGTCGTCAGTCCGACCAACACCG
609	CCGCGCGTATCTATCAGATCTGGG	CCCAGATCTGATAGATACGCGCGG
610	AAAGCATGCTCCACCTGGAGCGAG	CTCGCTCCAGGTGGAGCATGCTTT
611	ACTTGCATCGCTGGGTAGATCCGG	CCGGATCTACCCAGCGATGCAAGT
612	TGCTTACGCAGTGGATTGGTCAGA	TCTGACCAATCCACTGCGTAAGCA
613	ATGCAGATGAACAAATCGCCGAAT	ATTCGGCGATTTGTTCATCTGCAT
614	GCAATTCTGGGCCATGTATTCGTC	GACGAATACATGGCCCAGAATTGC
615	AGGGTTCCTTACGCGTCGACATGG	CCATGTCGACGCGTAAGGAACCCT
616	GTGGAGCTAATCGCGAGCCTCAGA	TCTGAGGCTCGCGATTAGCTCCAC
617	TCGTAGTCTCACCGGCAATGATCC	GGATCATTGCCGGTGAGACTACGA
618	TTATAGCAGTGCGCCAATGCTTCG	CGAAGCATTGGCGCACTGCTATAA
619	CGAACAGTGCTGTCCGTCGCTCAA	TTGAGCGACGGACAGCACTGTTCG
620	TCCGCGTGGACTGTTAGACGCTAT	ATAGCGTCTAACAGTCCACGCGGA
621	CATTAGCCCGCTGTCGGTAACTGT	ACAGTTACCGACAGCGGGCTAATG
622	GGAAAGAAACTCAGACGCGCAATG	CATTGCGCGTCTGAGTTTCTTTCC
623	CGACTCGCTGGACAGGAGAATCGT	ACGATTCTCCTGTCCAGCGAGTCG
624	CATGATCCTCTGTTTCACCCGCGG	CCGCGGGTGAAACAGAGGATCATG
625	GGCGTAGCGCTCTAAAAGCTTCGG	CCGAAGCTTTTAGAGCGCTACGCC
626	AGTGATGCCATCAGGCCCGTATAC	GTATACGGGCCTGATGGCATCACT
627	TATGGAAAGGGCAACAGCGCTATC	GATAGCGCTGTTGCCCTTTCCATA
628	CTGTGGTTGATGGAGGATCCACAC	GTGTGGATCCTCCATCAACCACAG
629	ACTCGCTGGAATTTGCGCTGACAC	GTGTCAGCGCAAATTCCAGCGAGT
630	CAGGCCCGAACCACGCGGTTACAG	CTGTAACCGCGTGGTTCGGGCCTG
631	GGCGCAATGGGCGCATAAATACTA	TAGTATTTATGCGCCCATTGCGCC
632	GGTCAATTCGCGCTACATGCCCTA	TAGGGCATGTAGCGCGAATTGACC
633	GATGGTGGACTGGAGCCCTTCCGC	GCGGAAGGGCTCCAGTCCACCATC
634	CCGCGCATAGCGCAATAGGGGAGA	TCTCCCCTATTGCGCTATGCGCGG
635	TCTTCTGGCTGTCCGGCACCCGAA	TTCGGGTGCCGGACAGCCAGAAGA
636	GCGTTCGCAATTCACGGGCCCTTA	TAAGGGCCCGTGAATTGCGAACGC
637	TCGTTTCGGCCTTGGAGAGTATCG	CGATACTCTCCAAGGCCGAAACGA
638	AGGTGCAAGTGCAAGGCGAGAGGC	GCCTCTCGCCTTGCACTTGCACCT
639	CGCCAGTTTCGATGGCTGACGTTT	AAACGTCAGCCATCGAAACTGGCG
640	GCTTTACCGCCGATCCCAGATATC	GATATCTGGGATCGGCGGTAAAGC
641	GTGCTTGACGAAGAGGCGAAATGT	ACATTTCGCCTCTTCGTCAAGCAC
642	CAGTCCGTGCGCTTCATGTCCTCA	TGAGGACATGAAGCGCACGGACTG
643	TACGCGTAAGAGCCTACCCTCGCG	CGCGAGGGTAGGCTCTTACGCGTA
644	GGCGAGTCTTGTGGGGACATGTGT	ACACATGTCCCCACAAGACTCGCC
645	CCAAAGCGAAGCGAGCGTGTCTAT	ATAGACACGCTCGCTTCGCTTTGG
646	GCCGTAGGTTGCTCTTCACCGAAC	GTTCGGTGAAGAGCAACCTACGGC
647	AAATCCGCGATGTGCCGTGAGGCT	AGCCTCACGGCACATCGCGGATTT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
648	GGCTTCGCACCCGTACCAATTTAG	CTAAATTGGTACGGGTGCGAAGCC
649	TGTAGAGTCCCACGTAGCCGGCAT	ATGCCGGCTACGTGGGACTCTACA
650	CACTAGTCTGGGGCAAGGTGCATT	AATGCACCTTGCCCCAGACTAGTG
651	TGTACTCGGCAGGCGCAATAGATT	AATCTATTGCGCCTGCCGAGTACA
652	AACGGGTATCGGAAGCGTAAAAGC	GCTTTTACGCTTCCGATACCCGTT
653	CGGACTGCCCGTTTGCAAGTTGAG	CTCAACTTGCAAACGGGCAGTCCG
654	ATCGTTCAGCACTGGAGCCCGTAA	TTACGGGCTCCAGTGCTGAACGAT
655	ATGCATCGAACTAGTCGTGACGGC	GCCGTCACGACTAGTTCGATGCAT
656	TTCCAGGCATTAAGGAGAGGGAGC	GCTCCCTCTCCTTAATGCCTGGAA
657	GTGCGACATCTACTCCACGATCCC	GGGATCGTGGAGTAGATGTCGCAC
658	CTCATCGTCCTAACACGAGAGCCC	GGGCTCTCGTGTTAGGACGATGAG
659	AATGGCACTTCGGCGGTGATGCAA	TTGCATCACCGCCGAAGTGCCATT
660	CCGTGGGAGGGAATCCAACCGAGG	CCTCGGTTGGATTCCCTCCCACGG
661	AAATTCTCGTTGGTGACGGCTCAT	ATGAGCCGTCACCAACGAGAATTT
662	TTGCTCTTATCCTTGTCCTGGGCG	CGCCCAGGACAAGGATAAGAGCAA
663	TTAAGGATCAGGCGGAGCTTGCAG	CTGCAAGCTCCGCCTGATCCTTAA
664	CGCGACTAAGGTGCTGCAACTCGA	TCGAGTTGCAGCACCTTAGTCGCG
665	GCTCGATTTCACGGCCCGTTGTTC	GAACAACGGGCCGTGAAATCGAGC
666	AGCAGAGTGCGTTGCAGAGGCTAA	TTAGCCTCTGCAACGCACTCTGCT
667	TGGAGGTGAGGACGACGTGCACTA	TAGTGCACGTCGTCCTCACCTCCA
668	AACCGTTTAGGGTACATTCGCGGT	ACCGCGAATGTACCCTAAACGGTT
669	TATGATCGCTCGGCTCACAGTTTG	CAAACTGTGAGCCGAGCGATCATA
670	GACTTTTTGCGGAAACGTCATGGT	ACCATGACGTTTCCGCAAAAAGTC
671	TGTCGGTTATTCCACCTGCAAGGA	TCCTTGCAGGTGGAATAACCGACA
672	CTATGGTTTGCACTGCGCCGTCGA	TCGACGGCGCAGTGCAAACCATAG
673	AGCAGGGAAATTCAATCGTTCGCA	TGCGAACGATTGAATTTCCCTGCT
674	CCTAACCGAGCGCTTAGCATTTCC	GGAAATGCTAAGCGCTCGGTTAGG
675	CCCGACCCTAACTCGCATTGAATA	TATTCAATGCGAGTTAGGGTCGGG
676	TTGCTTAATGGTGACGCCACGGAT	ATCCGTGGCGTCACCATTAAGCAA
677	GATGCTCGCCGTGTTTAGTTCACG	CGTGAACTAAACACGGCGAGCATC
678	TCGGATGACGAGTTTCCATGACGG	CCGTCATGGAAACTCGTCATCCGA
679	ATGCGGTCTACTTTCTCGATCGGG	CCCGATCGAGAAAGTAGACCGCAT
680	TTGCGAGGCTAAGCACACGGTAAA	TTTACCGTGTGCTTAGCCTCGCAA
681	AACTTAATTACCGCCTCTGGCGCC	GGCGCCAGAGGCGGTAATTAAGTT
682	GTGACCGCGAACTTGTTCCGACAG	CTGTCGGAACAAGTTCGCGGTCAC
683	TGCGGATTACCGATTCGCTCTTAA	TTAAGAGCGAATCGGTAATCCGCA
684	TGATAGGGGGCCACGTTGATCAGA	TCTGATCAACGTGGCCCCCTATCA
685	TCGCTCCGTAGCGATTCATCGTAG	CTACGATGAATCGCTACGGAGCGA
686	TGTCAGCTGGTAGCCTCCGTTTGA	TCAAACGGAGGCTACCAGCTGACA
687	AGCGTCGCATGACGCTTACGGCAC	GTGCCGTAAGCGTCATGCGACGCT
688	TCACTCAGCGCTGTGACTGCCTGA	TCAGGCAGTCACAGCGCTGAGTGA
689	GTTTGCGCTATAGTGGGGGACCGT	ACGGTCCCCCACTATAGCGCAAAC
690	GTCGCATTCTGCACTGGCTTCGCC	GGCGAAGCCAGTGCAGAATGCGAC
691	TGATTAGGTGCGGTCCCGTAGTCC	GGACTACGGGACCGCACCTAATCA
692	AAGGGACCTTGGGTGACGGCGAGA	TCTCGCCGTCACCCAAGGTCCCTT
693	TCAAATGGCCACCGCGTGTCATTC	GAATGACACGCGGTGGCCATTTGA
694	CTCCGACGACCAATAAATAGCCGC	GCGGCTATTTATTGGTCGTCGGAG
695	GGCTATTCCCGTAGAGAGCGTCCA	TGGACGCTCTCTACGGGAATAGCC
696	TGGATAACCTCTCGGTCCATCCAC	GTGGATGGACCGAGAGGTTATCCA
697	GACCGCTGTACGGGAGTGTGCCTT	AAGGCACACTCCCGTACAGCGGTC
698	GCCACAGAGTTTTAGCAGGGACCC	GGGTCCCTGCTAAAACTCTGTGGC
699	CCCACGCTTTCCGACCACTGACCT	AGGTCAGTGGTCGGAAAGCGTGGG
700	CATTGACACAATGCGGGGACTGAT	ATCAGTCCCCGCATTGTGTCAATG
701	AGCCACTCGACAGGGTTCCAAAGC	GCTTTGGAACCCTGTCGAGTGGCT
702	CAGGATGAGCAAAGCGACTCTCCA	TGGAGAGTCGCTTTGCTCATCCTG
703	CAAGGTATGGTCTGGGGCCTAAGC	GCTTAGGCCCCAGACCATACCTTG
704	GGTGTTCGGCCTAAACTCTTTCGG	CCGAAAGAGTTTAGGCCGAACACC
705	TTTAGTCGGACCCTGTGGCAATTC	GAATTGCCACAGGGTCCGACTAAA
706	CACACGTTTCCGACCAGCCTGAAC	GTTCAGGCTGGTCGGAAACGTGTG
707	CTGGACGAACTGGCTTCCTCGTAC	GTACGAGGAAGCCAGTTCGTCCAG
708	TTCACAATCCGCCGAAAACTGACC	GGTCAGTTTTCGGCGGATTGTGAA
709	AACAGGATATCCGCGATCACGACA	TGTCGTGATCGCGGATATCCTGTT
710	TACGTCGGATCCATTGCGCCGAGT	ACTCGGCGCAATGGATCCGACGTA
711	CATGGATCTCTCGGTTTGATCGCC	GGCGATCAAACCGAGAGATCCATG
712	AGCCAGGCGCGTATATACGCTCGG	CCGAGCGTATATACGCGCCTGGCT
713	ATTTGGCACGTGTCGTGCCATGTT	AACATGGCACGACACGTGCCAAAT
714	CCGCGTTGCACCACTTTGAGGTGC	GCACCTCAAAGTGGTGCAACGCGG
715	TTGGACGTGACAAGCATGGCGCTC	GAGCGCCATGCTTGTCACGTCCAA
716	CTGAATCGCGCAAGTAAATGGGGG	CCCCCATTTACTTGCGCGATTCAG
717	GATAAGGTCCACCAGATTGCGCGC	GCGCGCAATCTGGTGGACCTTATC
718	CTAACAATTGCCAACCGGGACGGC	GCCGTCCCGGTTGGCAATTGTTAG
719	GGTAACCTGGGTGCTTGCAGGTTA	TAACCTGCAAGCACCCAGGTTACC
720	ATCGGAGCCACCATTCGCATTGGG	CCCAATGCGAATGGTGGCTCCGAT
721	GTGAACTGGCTTGCCCCAGGATTA	TAATCCTGGGGCAAGCCAGTTCAC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
722	AGGCGATAGCATGGTCCCATATGA	TCATATGGGACCATGCTATCGCCT
723	AACGGTATCGTGGCTAATGCACGA	TCGTGCATTAGCCACGATACCGTT
724	AGTAGTGGTCCTCCAGATCGGCAA	TTGCCGATCTGGAGGACCACTACT
725	CCGTTGAATTGGACGGGAGGTTAG	CTAACCTCCCGTCCAATTCAACGG
726	GCATAAGTGCGGCATCGCGAAGGG	CCCTTCGCGATGCCGCACTTATGC
727	CGACAAGATGCAGCTGCTACATGC	GCATGTAGCAGCTGCATCTTGTCG
728	TCGCAGTGATTCCCGACCGATAAG	CTTATCGGTCGGGAATCACTGCGA
729	CAAGGCGAGTCCACTCGAGGGGAC	GTCCCCTCGAGTGGACTCGCCTTG
730	GCAACTTGCACGGCATAAGTGGCC	GGCCACTTATGCCGTGCAAGTTGC
731	TCCGAGCTTGACGTTCGCGACGTC	GACGTCGCGAACGTCAAGCTCGGA
732	AGCGCTGGGCTGTGCTGCCATCTC	GAGATGGCAGCACAGCCCAGCGCT
733	TTCATGTCGCTGAGTAACCCTCGC	GCGAGGGTTACTCAGCGACATGAA
734	CGAACCGCTAATGCCCATTGTCAG	CTGACAATGGGCATTAGCGGTTCG
735	CACGGAAGGTGGGACAAATCGCCG	CGGCGATTTGTCCCACCTTCCGTG
736	CACAGATGGAGACAAACGCGCCTT	AAGGCGCGTTTGTCTCCATCTGTG
737	TTTTCGCAACTCGCTCCATAACCC	GGGTTATGGAGCGAGTTGCGAAAA
738	ACGTTACGTTTCCGGCGCCTCTAA	TTAGAGGCGCCGGAAACGTAACGT
739	TATCGGATTGCGTGGGTTTCAATC	GATTGAAACCCACGCAATCCGATA
740	CTTCCACAATTGTCTGCGACGCAC	GTGCGTCGCAGACAATTGTGGAAG
741	TGCACAAAGGTATGGCTGTCCGGC	GCCGGACAGCCATACCTTTGTGCA
742	TCCGATGCCAGTCCCATCTTAAGA	TCTTAAGATGGGACTGGCATCGGA
743	CTGAAACCGTGCGAATCGAGGTGA	TCACCTCGATTCGCACGGTTTCAG
744	CGGTGTTCCGCGTGTCGAAAAAAT	ATTTTTTCGACACGCGGAACACCG
745	TCTAGCAGGCCTTTTGAATCGCCA	TGGCGATTCAAAAGGCCTGCTAGA
746	GAGTCACCTCTGAGACGGACGCCA	TGGCGTCCGTCTCAGAGGTGACTC
747	TCTTCTGTCATCCTGCAGCAGCAT	ATGCTGCTGCAGGATGACAGAAGA
748	GCGGATGAAACCTGAAAGGGGCCT	AGGCCCCTTTCAGGTTTCATCCGC
749	GGGGCCCCAAACTGGTATCAAGCC	GGCTTGATACCAGTTTGGGGCCCC
750	GCATTGGCTTCGGATTCTCCTACA	TGTAGGAGAATCCGAAGCCAATGC
751	AGGCGGCCCAACTGTGAGGTCTTG	CAAGACCTCACAGTTGGGCCGCCT
752	ACACCATGTGCTCCGCGCTGCAGT	ACTGCAGCGCGGAGCACATGGTGT
753	ACGATGAACATGAATCGGGAGTCG	CGACTCCCGATTCATGTTCATCGT
754	CTGCATCCCTGTAGCAGCGCTCCG	CGGAGCGCTGCTACAGGGATGCAG
755	GTGCCGTATTTCGACCTGTGCGTT	AACGCACAGGTCGAAATACGGCAC
756	GCAGTGCGCACTTCAGTTCAAAAG	CTTTTGAACTGAAGTGCGCACTGC
757	GCGATTTTAAGCGATGCCTTGACG	CGTCAAGGCATCGCTTAAAATCGC
758	TAGGTGACCTAGGCTTGCTTGCGG	CCGCAAGCAAGCCTAGGTCACCTA
759	CTGGATACCTTGCCTGTGCGGCGC	GCGCCGCACAGGCAAGGTATCCAG
760	CCCCTTACGGCTCGTCGTCTATGC	GCATAGACGACGAGCCGTAAGGGG
761	GCGCTTGCCCGATGCGATGCATTA	TAATGCATCGGATCGGGCAAGCGC
762	TTTCTGTAAGCGGCCTGGGGTTCA	TGAACCCCAGGCCGCTTACAGAAA
763	GGCTGAGGTGAGCGGTAAGGATGA	TCATCCTTACCGCTCACCTCAGCC
764	TCTTGGCCTCCCCGATCTAATTTG	CAAATTAGATCGGGGAGGCCAAGA
765	GGAGGTAACGCCGTGTACGTAGGA	TCCTACGTACACGGCGTTACCTCC
766	GTAATCCATTTGTGGCTGCGTCAA	TTGACGCAGCCACAAATGGATTAC
767	CAAACCCATTCCAGCAGACGCCTG	CAGGCGTCTGCTGGAATGGGTTTG
768	TAGGAGGAATTTGGCATGCGGGCG	CGCCCGCATGCCAAATTCCTCCTA
769	ATAGGTAGGATGTGCCCGGCGTTG	CAACGCCGGGCACATCCTACCTAT
770	GCAAGTGCTTAGCTCGTCAGCCTC	GAGGCTGACGAGCTAAGCACTTGC
771	CTGGCTGTGTCGCATCTCGTTAAC	GTTAACGAGATGCGACACAGCCAG
772	CTAACGTCGTCTCGCGCAATCACT	AGTGATTGCGCGAGACGACGTTAG
773	TTTTCATAAACGTTGTCCCCGAGC	GCTCGGGGACAACGTTTATGAAAA
774	AGCAGGAGGACGAACCTCCGCTCC	GGAGCGGAGGTTCGTCCTCCTGCT
775	TTCAAGCACCATCGTGCAATCCAA	TTGGATTGCACGATGGTGCTTGAA
776	AGCGTCGCCAGTGATCGCTAGTGG	CCACTAGCGATCACTGGCGACGCT
777	TACATTCCCTGCCTCCGTGGGCTT	AAGCCCACGGAGGCAGGGAATGTA
778	CGCTTCGCGTATTCAGTAGCGGTT	AACCGCTACTGAATACGCGAAGCG
779	TCGGACGCGTCGACACTCATTATA	TATAATGAGTGTCGACGCGTCCGA
780	TCTGAGCAGGCCAGCGCTCCAGCT	AGCTGGAGCGCTGGCCTGCTCAGA
781	TTGAATTGCCAAGCCCTGAAAGCC	GGCTTTCAGGGCTTGGCAATTCAA
782	AGTTTTCGCCTTGATGCGTCGGTG	CACCGACGCATCAAGGCGAAAACT
783	GTTTCATAGGCCACGCGTGCTAAA	TTTAGCACGCGTGGCCTATGAAAC
784	GGAGCGAAGACTTCGTCTGCCCAA	TTGGGCAGACGAAGTCTTCGCTCC
785	ATTGGCCGAGGGTGAATGCAGCCT	AGGCTGCATTCACCCTCGGCCAAT
786	TGATCCATCCGAATGCTTTTCCAT	ATGGAAAAGCATTCGGATGGATCA
787	GCACACAGTTGTCTTGGCCCATGA	TCATGGGCCAAGACAACTGTGTGC
788	CTGGCGGGCAGTGGAAAAAACAAC	GTTGTTTTTTCCACTGCCCGCCAG
789	ATCTCCATGCGTAAGACTGCTCCG	CGGAGCAGTCTTACGCATGGAGAT
790	TCTCCTCTCGTCGCAGTTCGTGGA	TCCACGAACTGCGACGAGAGGAGA
791	TAGCGTATTCACTCTTGCCGAGCA	TGCTCGGCAAGAGTGAATACGCTA
792	CAATCAAAAGCCACGGCGCGATGG	CCATCGCGCCGTGGCTTTTGATTG
793	AGCGTCACGGAATTCAGCAGATCT	AGATCTGCTGAATTCCGTGACGCT
794	GACTCCCTGTTAATGCGCCCAAGG	CCTTGGGCGCATTAACAGGGAGTC
795	TAGGCACTGCCGGTTCAGATTCAA	TTGAATCTGAACCGGCAGTGCCTA

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
796	AACAGGGTGATAACGGTGGCCAAT	ATTGGCCACCGTTATCACCCTGTT
797	CGTGCGTACCATGTGTAAGTGCGT	ACGCACTTACACATGGTACGCACG
798	GACCAATTCTACTTCGGCAGCCCA	TGGGCTGCCGAAGTAGAATTGGTC
799	ATCGGACCGATTTGCTTTTGGCTG	CAGCCAAAAGCAAATCGGTCCGAT
800	TCCGCCGAAGCACACGCTTATTCG	CGAATAAGCGTGTGCTTCGGCGGA
801	AACGGTACGCATTGTGAGCAGTGT	ACACTGCTCACAATGCGTACCGTT
802	TGGCGACTACTGTTCCCCTGAATC	GATTCAGGGGAACAGTAGTCGCCA
803	CAGAGGGGACAGCCGTATGCCTTA	TAAGGCATACGGCTGTCCCCTCTG
804	CGGTGGTTTTATCGGAATCTGCGA	TCGCAGATTCCGATAAAACCACCG
805	TTGGCCTCCGACCTCACGACATAT	ATATGTCGTGAGGTCGGAGGCCAA
806	CGTTTCGCTAGCATCTGGCGCCGA	TCGGCGCCAGATGCTAGCGAAACG
807	ACTAAGCGGTGGAGCCGGTGGATG	CATCCACCGGCTCCACCGCTTAGT
808	ATATTGGCTGCGTTTACGGGCCGC	GCGGCCCGTAAACGCAGCCAATAT
809	CCGCTATGGTGGCAATCCCGATAC	GTATCGGGATTGCCACCATAGCGG
810	GTTGCATGTGGCTCAGGCGGCATA	TATGCCGCCTGAGCCACATGCAAC
811	ATTCTGGGGAGTGACCCAGGGCTT	AAGCCCTGGGTCACTCCCCAGAAT
812	CTCTCCAAGGAGACGAGCCAATGT	ACATTGGCTCGTCTCCTTGGAGAG
813	GAAAGGACGGGATTTGGGGGCTAA	TTAGCCCCCAAATCCCGTCCTTTC
814	TATGTAGTACCTTGGCTCGCGCCA	TGGCGCGAGCCAAGGTACTACATA
815	TCCCTTTCGATGAGCGGCTGTACT	AGTACAGCCGCTCATCGAAAGGGA
816	TAGATCGGGCAGAGCCCGTATCTT	AAGATACGGGCTCTGCCCGATCTA
817	GGAATGCTTTAGGCTGCCGAGCTG	CAGCTCGGCAGCCTAAAGCATTCC
818	ATGGTAGCAACATTCAACGCCAGG	CCTGGCGTTGAATGTTGCTACCAT
819	CTATGAAACGTGTGGCCCAGCAAC	GTTGCTGGGCCACACGTTTCATAG
820	ATGTTGCTAGTGCCTTTCGGGCCT	AGGCCCGAAAGGCACTAGCAACAT
821	CCAATGTGCGCAGACTCAGTCATT	AATGACTGAGTCTGCGCACATTGG
822	GATAGTGCTCGCAAACGGGCCTTC	GAAGGCCCGTTTGCGAGCACTATC
823	GCACCCTGTTGCCTCATTGAGCGT	ACGCTCAATGAGGCAACAGGGTGC
824	GGCGTGAATAGAGTGACCAGGCGG	CCGCCTGGTCACTCTATTCACGCC
825	ACGTGCCAGCTGCGGGCACTTTAT	ATAAAGTGCCCGCAGCTGGCACGT
826	AGTGGAATAGTCGCGTCGTGCCGC	GCGGCACGACGCGACTATTCCACT
827	ACTCGCCTATTACCGCTGGATTGG	CCAATCCAGCGGTAATAGGCGAGT
828	GAGACCGGATTGAGATGATCCCGT	ACGGGATCATCTCAATCCGGTCTC
829	CTGGCAGTTTACCACCGAACCAGT	ACTGGTTCGGTGGTAAACTGCCAG
830	TTACATTGCCGATTTCGCATGTGA	TCACATGCGAAATCGGCAATGTAA
831	TAAAACTGAAGGGTCGCCTCAGCA	TGCTGAGGCGACCCTTCAGTTTTA
832	GGCTTCGCATGCCTTTGCAACATT	AATGTTGCAAAGGCATGCGAAGCC
833	AAGACCGAAGGTCTCTCTGAGGGC	GCCCTCAGAGAGACCTTCGGTCTT
834	GCCTATGGCTCCAGCTCAGCAGTA	TACTGCTGAGCTGGAGCCATAGGC
835	CGTATCATAGCGTTCGGTGGACAA	TTGTCCACCGAACGCTATGATACG
836	CATGCGCTCGCACTCTGCCTGTCT	AGACAGGCAGAGTGCGAGCGCATG
837	TGGGCAATTCGGAAACGTCGGTCT	AGACCGACGTTTCCGAATTGCCCA
838	TTGCGGAGATGCGACGGTACATTG	CAATGTACCGTCGCATCTCCGCAA
839	ACTTTCGCACGTCGATCTGGACTG	CAGTCCAGATCGACGTGCGAAAGT
840	CTAACTGCCGCGGCAAACTGATTA	TAATCAGTTTGCCGCGGCAGTTAG
841	GGCCGCGGATTTTATTCCTTGGAT	ATCCAAGGAATAAAATCCGCGGCC
842	GAATTTGGAACGGTGTTCCGATGA	TCATCGGAACACCGTTCCAAATTC
843	GTCCATCCATCTACGGCATCAGGA	TCCTGATGCCGTAGATGGATGGAC
844	TAAACGACCTGGCACATGTGCGTA	TACGCACATGTGCCAGGTCGTTTA
845	CACCATCCAAGAGCCAATCCTAGG	CCTAGGATTGGCTCTTGGATGGTG
846	ACTCATATACGATCAGTCCGCCGC	GCGGCGGACTGATCGTATATGAGT
847	GTGCCAACCGACGATCAACCGAAC	GTTCGGTTGATCGTCGGTTGGCAC
848	TGGGGTTCGTACAGGTCGGTTCAT	ATGAACCGACCTGTACGAACCCCA
849	AACAGTAGAGGCGAGGCCTGCGGG	CCCGCAGGCCTCGCCTCTACTGTT
850	TGCATCGAATCCGAGATGGATCTT	AAGATCCATCTCGGATTCGATGCA
851	GCGTCACGTTATGTCCGCTCTGTC	GACAGAGCGGACATAACGTGACGC
852	GGGACATGCGTAGCGCAATATCAC	GTGATATTGCGCTACGCATGTCCC
853	CACACGTCACACCATCCAAAGTGG	CCACTTTGGATGGTGTGACGTGTG
854	ATGCTCAGGTGCTAAATACGGCCA	TGGCCGTATTTAGCACCTGAGCAT
855	AAAAATGTTTAGCGCGCTGACTGG	CCAGTCAGCGCGCTAAACATTTTT
856	ATAGTCCGTTTCCGTTCCCAACGA	TCGTTGGGAACGGAAACGGACTAT
857	TCGATCTTCTGGGTTGCAGACCAG	CTGGTCTGCAACCCAGAAGATCGA
858	GTCGGCGCAGCCGATCCTCATGTC	GACATGAGGATCGGCTGCGCCGAC
859	GTTGCGGGGTGTCGAAAAGGATCT	AGATCCTTTTCGACACCCCGCAAC
860	ATCTCTTCCTCGGGTGGATGCCAG	CTGGCATCCACCCGAGGAAGAGAT
861	TGATGTGCGTTTCAGCTTTTCGCG	CGCGAAAAGCTGAAACGCACATCA
862	GTTAAGGGGTGAGAACATCCGGCC	GGCCGGATGTTCTCACCCCTTAAC
863	AAGTCGTCTCCCTGCGTCTCGTCC	GGACGAGACGCAGGGAGACGACTT
864	CCGACCTAATAAGGCGCAACAATG	CATTGTTGCGCCTTATTAGGTCGG
865	CATCATTGGCACCGTACCAATGCC	GGCATTGGTACGGTGCCAATGATG
866	TGGAGAAAGGGAAGTGCAGCAACG	CGTTGCTGCACTTCCCTTTCTCCA
867	TGGTACTCCTTGTCATGCCTGCCA	TGGCAGGCATGACAAGGAGTACCA
868	GGCACAGGTTCTCTTGCAGCGCGG	CCGCGCTGCAAGAGAACCTGTGCC
869	GAATCTGGGCATTGCTACGAGACC	GGTCTCGTAGCAATGCCCAGATTC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
870	CGAAATGGGAGCGTCCACTACCAC	GTGGTAGTGGACGCTCCCATTTCG
871	ACATATGAGCTCGCGTGCTTGCAT	ATGCAAGCACGCGAGCTCATATGT
872	TCGAGCACGGTCACTGATAAAGCC	GGCTTTATCAGTGACCGTGCTCGA
873	GAGGGTCCCTGCTCAGAGTTGGTT	AACCAACTCTGAGCAGGGACCCTC
874	AAATGCGATCGCCCCTTATGGAAT	ATTCCATAAGGGGCGATCGCATTT
875	CTACCCGAATGGATTGCGGATGGC	GCCATCCGCAATCCATTCGGGTAG
876	AGGGACTGGCAGGTCTCTGCGCGT	ACGCGCAGAGACCTGCCAGTCCCT
877	TAACGATCCATTCCACGAATGCAG	CTGCATTCGTGGAATGGATCGTTA
878	GGCCGCACGTACGATTACGCCTTG	CAAGGCGTAATCGTACGTGCGGCC
879	TGGGGAATGCATCAGTTGTTGGCT	AGCCAACAACTGATGCATTCCCCA
880	TATCTGGGAGTAGCAGGCAGGGCC	GGCCCTGCCTGCTACTCCCAGATA
881	CCGAAGGTTTCACGCTCAGGTCGC	GCGACCTGAGCGTGAAACCTTCGG
882	GAACCCAGCTGGGACATCCTTCAG	CTGAAGGATGTCCCAGCTGGGTTC
883	TGCATGCGAGCAAATAACCCGGAC	GTCCGGGTTATTTGCTCGCATGCA
884	AATTGTCCGCCAAACGCTTTTCAG	CTGAAAAGCGTTTGGCGGACAATT
885	GTCGGCTTCGAGCGATCGAGTGTG	CACACTCGATCGCTCGAAGCCGAC
886	TCGCGTGCTCTACGTAGCCCATGA	TCATGGGCTACGTAGAGCACGCGA
887	GGCTTCCGCGATAACGTAATTCGC	GCGAATTACGTTATCGCGGAAGCC
888	TGTAGCCGACTAGGGCCGAAGCCC	GGGCTTCGGCCCTAGTCGGCTACA
889	AAGCGAACGCCCTGGCTGAATATT	AATATTCAGCCAGGGCGTTCGCTT
890	TGTCACGCGACGTGCTGCAGATTT	AAATCTGCAGCACGTCGCGTGACA
891	CCGTGTCCGTGTTGTCGACAGGCG	CGCCTGTCGACAACACGGACACGG
892	CCCCACACGTTGCGCCTATATGTG	CACATATAGGCGCAACGTGTGGGG
893	GGCGGGCACAACTCAACACAGATG	CATCTGTGTTGAGTTGTGCCCGCC
894	CGACTGCGGGATCACCGGTGATTA	TAATCACCGGTGATCCCGCAGTCG
895	TCGGGACATGACCGGTACGGAGTC	GACTCCGTACCGGTCATGTCCCGA
896	TACCTCGAGTGGCCGTTGATCGGG	CCCGATCAACGGCCACTCGAGGTA
897	TAATTCATGGGGCTAGCCGAACCA	TGGTTCGGCTAGCCCCATGAATTA
898	ACACTCTAAGCCGATTCCGTTCGA	TCGAACGGAATCGGCTTAGAGTGT
899	GTGGGCGTGAGTGACACGCACAAA	TTTGTGCGTGTCACTCACGCCCAC
900	ACGACTCCTCGGGCAAAGTACGTA	TACGTACTTTGCCCGAGGAGTCGT
901	TGTGGTCATGGCGCTACTGTTTTC	GAAAACAGTAGCGCCATGACCACA
902	CTTTCGCTAGCCAGAGCGGGTTCC	GGAACCCGCTCTGGCTAGCGAAAG
903	ACAGGGCGTGTTAGCGTGTGACAA	TTGTCACACGCTAACACGCCCTGT
904	GGTACTTCCGGCGTATCGGGCCAC	GTGGCCCGATACGCCGGAAGTACC
905	GTGGGTTTTGTTCACCCTTCTGGG	CCCAGAAGGGTGAACAAAACCCAC
906	ACGCAATTCCGCATTACTTACCCG	CGGGTAAGTAATGCGGAATTGCGT
907	CGCCTCGACTGCGGTCAAGCACAA	TTGTGCTTGACCGCAGTCGAGGCG
908	GTGAAATGGATCCAGAGAGGGCCA	TGGCCCTCTCTGGATCCATTTCAC
909	TATAAACGCTGCAGGGCTCCGTTA	TAACGGAGCCCTGCAGCGTTTATA
910	GTTATTCAGGCGGCTTGTAACGGG	CCCGTTACAAGCCGCCTGAATAAC
911	GGGTTCTAGCGTGCGCGTTCAGTT	AACTGAACGCGCACGCTAGAACCC
912	TTGGGCTCGAGCGGTACACCACTA	TAGTGGTGTACCGCTCGAGCCCAA
913	CCGTCTTCAGGACAACGGTATGCG	CGCATACCGTTGTCCTGAAGACGG
914	GGACCCTTTGACAGATTGCGGCAC	GTGCCGCAATCTGTCAAAGGGTCC
915	TAAATTTTATCGCCAGGCGGCGCT	AGCGCCGCCTGGCGATAAAATTTA
916	GCCGAACGCAAGATCGCTTGAACT	AGTTCAAGCGATCTTGCGTTCGGC
917	TAGGCCATTGGTGCCCTAAGACGG	CCGTCTTAGGGCACCAATGGCCTA
918	CAAACCACAGCTTACAGGCTGCGT	ACGCAGCCTGTAAGCTGTGGTTTG
919	TAAACGGAGACTGGCACGGTAGCA	TGCTACCGTGCCAGTCTCCGTTTA
920	TAGCGCGCATCACACTTGGAATCG	CGATTCCAAGTGTGATGCGCGCTA
921	TGCTGACACAAACGAGCCGTTTCG	CGAAACGGCTCGTTTGTGTCAGCA
922	CGCTTAACGGCATTGACTGTCCAC	GTGGACAGTCAATGCCGTYAAGCG
923	TTCCACGGCCGTGTATTACGGATA	TATCCGTAATACACGGCCGTGGAA
924	TTTATGCCGTTGCCGAGGAAGACT	AGTCTTCCTCGGCAACGGCATAAA
925	AGTGCCGAGATAGGGGACTGGGCG	CGCCCAGTCCCCTATCTCGGCACT
926	CTAGTCTCCACGCCCTCGGGACGA	TCGTCCCGAGGGCGTGGAGACTAG
927	CCGCCATTCGGAAGATGGATGATG	CATCATCCATCTTCCGAATGGCGG
928	TGACGGTGAAAGTCGATTGCGAAG	CTTCGCAATCGACTTTCACCGTCA
929	ATATGCGTCACCACCCGGTTCCGA	TCGGAACCGGGTGGTGACGCATAT
930	CCATCAGTGAAGGGGTTGCTGCCA	TGGCAGCAACCCCTTCACTGATGG
931	CATATGTGCTTGGCTTGCGATGAC	GTCATCGCAAGCCAAGCACATATG
932	TCTGCTTTGGAAGCCTGAACTGCT	AGCAGTTCAGGCTTCCAAAGCAGA
933	CGATTTGGTCAAGAAGGCGGAAAT	ATTTCCGCCTTCTTGACCAAATCG
934	ATCAGAGGCCTTCCCGCCTCGTTA	TAACGAGGCGGGAAGGCCTCTGAT
935	ATTGTTGTCGTTGCCACATCGCAG	CTGCGATGTGGCAACGACAACAAT
936	TGAAATGTGTCTGGACGCGAGTCT	AGACTCGCGTCCAGACACATTTCA
937	GCGGGCGATGCTCCTTAAAGGGTA	TACCCTTTAAGGAGCATCGCCCGC
938	CCGCAATCTCCATGCGTCGACCGT	ACGGTCGACGCATGGAGATTGCGG
939	TGCCGCGTAATCACCTGGAACTTG	CAAGTTCCAGGTGATTACGCGGCA
940	TTCCAGTAGCCAGCGGTAGTGTGA	TCACACTACCGCTGGCTACTGGAA
941	CTGAATTCCGCCTATTGTTCGGCA	TGCCGAACAATAGGCGGAATTCAG
942	GCTTGAACCTCGAGGCGATGTTCT	AGAACATCGCCTCGAGGTTCAAGC
943	CAAGCGTGGAAGTACGACCCGCCA	TGGCGGGTCGTACTTCCACGCTTG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
944	GTGTGCACTGGATCCGAGCCCTAG	CTAGGGCTCGGATCCAGTGCACAC
945	TCCCTGGGCTAGCATTGCGAGGTT	AACCTCGCAATGCTAGCCCAGGGA
946	AGAACCAAAGACGCTTGTTTGCCG	CGGCAAACAAGCGTCTTTGGTTCT
947	CGTCACATGCAAACGTTCCCTCCC	GGGAGGGAACGTTTGCATGTGACG
948	TGACCGCATGTGTATTGAGTCGCT	AGCGACTCAATACACATGCGGTCA
949	GCGGGCCCAATGAGTATCCGTCAT	ATGACGGATACTCATTGGGCCCGC
950	TAGTGACTGTGAACGCCCCTGGTT	AACCAGGGGCGTTCACAGTCACTA
951	GGCACCGTCTGCCGCGCGTATATC	GATATACGCGCGGCAGACGGTGCC
952	TCGATGCAGTCTTTTTCCCGTCAA	TTGACGGGAAAAAGACTGCATCGA
953	ACCCCGTGGGGTTTCGCCATTTTT	AAAAATGGCGAAACCCCACGGGGT
954	CTACACGCGCAGTTGTGACTTGTG	GACAAGTCACAACTGCGCGTGTAG
955	CGCAGCGACCTCATCTCTGGAGCC	GGCTCCAGAGATGAGGTCGCTGCG
956	CGACCCAGCACTCCTAAAATCGGT	ACCGATTTTAGGAGTGCTGGGTCG
957	ACGCGCCGCTCATCACTACAATCT	AGATTGTAGTGATGAGCGGCGCGT
958	CGCAACTTCCTGTGGCAAAGCCAG	CTGGCTTTGCCACAGGAAGTTGCG
959	TCGTTGGGCACATAAGGCAACTGA	TCAGTTGCCTTATGTGCCCAACGA
960	CCGCTTGTAATTGCCATTCTCCGT	ACGGAGAATGGCAATTACAAGCGG
961	GTAACCAGGGAGTCCTGGGCTGTG	CACAGCCCAGGACTCCCTGGTTAC
962	AGCGCAAGATCTGGGGGCAGTCAC	GTGACTGCCCCCAGATCTTGCGCT
963	GCGTACATCTGCTCATCAGCATGG	CCATGCTGATGAGCAGATGTACGC
964	CCTCTGTGGCAGGAAAGAAACCGT	ACGGTTTCTTTCCTGCCACAGAGG
965	CCTATGCAATGGACCTGCATCGGA	TCCGATGCAGGTCCATTGCATAGG
966	CTCGGTGGATGGCGAATAAGGATA	TATCCTTATTCGCCATCCACCGAG
967	CCTCACTCGTGATGGCGTGACGCA	TGCGTCACGCCATCACGAGTGAGG
968	TACGCTCACAGAACGCCATACGCC	GGCGTATGGCGTTCTGTGAGCGTA
969	CCGGAGAAGTTACGCGGATCGGAC	GTCCGATCCGCGTAACTTCTCCGG
970	GCGCCCTCACTGCATTTTTGGTAT	ATACCAAAAATGCAGTGAGGGCGC
971	ACTTTCAGCACGCGAACAGCGCAA	TTGCGCTGTTCGCGTGCTGAAAGT
972	CTAAACGCCCTTGATGCATGAGCA	TGCTCATGCATCAAGGGCGTTTAG
973	GCTTGCCTTTTACGATCGTCGCTA	TAGCGACGATCGTAAAAGGCAAGC
974	CAGACATCGTACGCACTCGGCATC	GATGCCGAGTGCGTACGATGTCTG
975	TAGCCGCGCGGCTCCTATGCTCTT	AAGAGCATAGGAGCCGCGCGGCTA
976	GATGCCCTTTTGGTCCCCATGCCA	TGGCATGGGGACCAAAAGGGCATC
977	TGAGCTGCCTTGCCACGATGCCTC	GAGGCATCGTGGCAAGGCAGCTCA
978	CCGCCGTATACGTGCCATAGTTTG	CAAACTATGGCACGTATACGGCGG
979	TAGTGCTCTCCGCGCTCATCCAAC	GTTGGATGAGCGCGGAGAGCACTA
980	CCCTAGATAAGTTGGGGTGGGACG	CGTCCCACCCCAACTTATCTAGGG
981	TGAAGGGCCACCTGATATGGTTTC	GAAACCATATCAGGTGGCCCTTCA
982	GCCGCCTCCGACTGGTTAACCCGA	TCGGGTTAACCAGTCGGAGGCGGC
983	CGCACGGCTACTAACAGCGGATCA	TGATCCGCTGTTAGTAGCCGTGCG
984	CCGGACCAATTCCAACGAGCATCG	CGATGCTCGTTGGAATTGGTCCGG
985	CATTGAGGTCCACCGTTCACATCC	GGATGTGAACGGTGGACCTCAATG
986	AGGACGCAGCATGTCCCAGCCGAG	CTCGGCTGGGACATGCTGCGTCCT
987	TAATCGCGGGCCATACTACCAACG	CGTTGGTAGTATGGCCCGCGATTA
988	CGCAAATTTCTCCGGTCGGCAAGC	GCTTGCCGACCGGAGAAATTTGCG
989	GTGGCTCGACTAATGCCTTGCGTG	CACGCAAGGCATTAGTCGAGCCAC
990	TGTGGGCGTGTTCCGGCTCACTGT	ACAGTGAGCCGGAACACGCCCACA
991	GTTCTTCCTTTTCTGCGGTGGGAA	TTCCCACCGCAGAAAAGGAAGAAC
992	ACCTCGAGTCAGATTGTGCGCCTT	AAGGCGCACAATCTGACTCGAGGT
993	CAAGTGGACAGACGGTTTGTTCCG	CGGAACAAACCGTCTGTCCACTTG
994	TCCAGTTGAGTCGCGCCGACGAGG	CCTCGTCGGCGCGACTCAACTGGA
995	CGCAACAGGTCAGCCCTTATTTGC	GCAAATAAGGGCTGACCTGTTGCG
996	GCCGTGACTCCTGCAATGTCGGTA	TACCGACATTGCAGGAGTCACGGC
997	ATCAGCGCAAGCTGGTCTGAAACA	TGTTTCAGACCAGCTTGCGCTGAT
998	CCCTGGCCAGAACGAGAGGCCATG	CATGGCCTCTCGTTCTGGCCAGGG
999	ACGATCAAGGACTCGTCAGGGTTG	CAACCCTGACGAGTCCTTGATCGT
1000	TTCATGGCACCAAGACCACCGTTA	TAACGGTGGTCTTGGTGCCATGAA
1001	ACAGCAAGGAGATGGATTGCGACG	CGTCGCAATCCATCTCCTTGCTGT
1002	CGTAAATATCTGCGGCGGTGTGAA	TTCACACCGCCGCAGATATTTACG
1003	GGAAACACGTGTTCGTCTGTTGGC	GCCAACAGACGAACACGTGTTTCC
1004	CGATGTTAGGATTCGGATAGGCCA	TGGCCTATCCGAATCCTAACATCG
1005	ATCGGACAAGGACAAGTGGATGGT	ACCATCCACTTGTCCTTGTCCGAT
1006	GCCCGGAGGACAAAGTTCGAGTTA	TAACTCGAACTTTGTCCTCCGGGC
1007	AAATCCGACAAATGGGCACATGGA	TCCATGTGCCCATTTGTCGGATTT
1008	CAGTTAGGGGATGCGGATGAGTGA	TCACTCATCCGCATCCCCTAACTG
1009	CGGCAGGTGGAGATTCCGACATTG	CAATGTCGGAATCTCCACCTGCCG
1010	TAGGGCAGCCAGGTTCACTCATCT	AGATGAGTGAACCTGGCTGCCCTA
1011	GCACCGTATTAGCAGTAGGCACGC	GCGTGCCTACTGCTAATACGGTGC
1012	ACGCATTACAGGTGTGCGAAGGGA	TCCCTTCGCACACCTGTAATGCGT
1013	CGTGACTGCACGTGTTCCACAGGG	CCCTGTGGAACACGTGCAGTCACG
1014	GCTGAACTACCGCCTAAAATCGCG	CGCGATTTTAGGCGGTAGTTCAGC
1015	AGCACGCCAGGGAGGATCGAGTTA	TAACTCGATCCTCCCTGGCGTGCT
1016	ATGAGGGCAAGGAATGGGTCATGC	GCATGACCCATTCCTTGCCCTCAT
1017	GGGTCTCTCGTAATCAAAGGCCGA	TCGGCCTTTGATTACGAGAGACCC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1018	TATCTTGCGCAACGCCTCCATTTA	TAAATGGAGGCGTTGCGCAAGATA
1019	GGTTACACCTACGGAATCCAGCGG	CCGCTGGATTCCGTAGGTGTAACC
1020	ACACCGAGTTGGTCCGGTCAATAG	CTATTGACCGGACCAACTCGGTGT
1021	TCCCAGATTAAACGCTAGCCACCG	CGGTGGCTAGCGTTTAATCTGGGA
1022	TTGGTGAAACTGGCCCGTCGGAAG	CTTCCGACGGGCCAGTTTCACCAA
1023	CCAGGGGAGTTGACAATGAGGCTG	CAGCCTCATTGTCAACTCCCCTGG
1024	TCTGCGTTATTGGACCGTTTGTCG	CGACAAACGGTCCAATAACGCAGA
1025	TATGGGATGCTAAACCGGCGTACA	TGTACGCCGGTTTAGCATCCCATA
1026	CACAGACGTCTGTCGGGCTTGTGT	ACACAAGCCCGACAGACGTCTGTG
1027	AGAATGCCGTTCGCCTACTCCCGT	ACGGGAGTAGGCGAACGGCATTCT
1028	CGACGGATAATGCAGGCCTCATGA	TCATGAGGCCTGCATTATCCGTCG
1029	ACCCTCTAAAGCAATAGGTCGGCG	CGCCGACCTATTGCTTTAGAGGGT
1030	CACTCACGGCAGAAGCCTGCTTGT	ACAAGCAGGCTTCTGCCGTGAGTG
1031	ATCAGCCCACATATTCTCGGCCGT	ACGGCCGAGAATATGTGGGCTGAT
1032	CAAATCTGGGGTCGTCCTAAACGC	GCGTTTAGGACGACCCCAGATTTG
1033	TGTCGCCCATGGCAGGTTAAATAC	GTATTTAACCTGCCATGGGCGACA
1034	GGGGGCCCATCAATTCATTATCGA	TCGATAATGAATTGATGGGCCCCC
1035	GTCGAGCAGCTTTAGTATCGCGGG	CCCGCGATACTAAAGCTGCTCGAC
1036	CCGCTAAGCACCGAAGGCTCACAA	TTGTGAGCCTTCGGTGCTTAGCGG
1037	TAGAATTAGCGAACGGTGATCCCG	CGGGATCACCGTTCGCTAATTCTA
1038	CACATGACATTTGGCAAAGGTCCA	TGGACCTTTGCCAAATGTCATGTG
1039	TCAACGCACTGGCGATGACTAGAT	ATCTAGTCATCGCCAGTGCGTTGA
1040	CGGGAAATGTCTTTAGCCGTCGAA	TTCGACGGCTAAAGACATTTCCCG
1041	ATCAGAGCAAATCTGCAGCGGGGA	TCCCCGCTGCAGATTTGCTCTGAT
1042	GGCCTGTTTCTGTCCAACTGGGCT	AGCCCAGTTGGACAGAAACAGGCC
1043	ATTTCACCTCGCTGATCGCTTCCG	CGGAAGCGATCAGCGAGGTGAAAT
1044	AGTGACGCCGAGTCGCGAGGGTTA	TAACCCTCGCGACTCGGCGTCACT
1045	AGTTGTCTCATCCTGTCCGGGACC	GGTCCCGGACAGGATGAGACAACT
1046	CTTCTTTGTGCACACTTGCCAGGG	CCCTGGCAAGTGTGCACAAAGAAG
1047	CACCTCATCGGAGCATAGCAACCC	GGGTTGCTATGCTCCGATGAGGTG
1048	ATGCGATCCATGACAAGGGTTGCT	AGCAACCCTTGTCATGGATCGCAT
1049	CCCGTGGAGATGATGTGCGGCTTA	TAAGCCGCACATCATCTCCACGGG
1050	CCCAATAGACGCCACAGCCAGTGA	TCACTGGCTGTGGCGTCTATTGGG
1051	AACGACCACGACCCTCGCCGAGTA	TACTCGGCGAGGGTCGTGGTCGTT
1052	GGTGCTTTGTCTGAGGCGAGTGAA	TTCACTCGCCTCAGACAAAGCACC
1053	CTGTCGGCGCTGCTCTCCGAATTT	AAATTCGGAGAGCAGCGCCGACAG
1054	CTCGCCGGAGTGTTGTAAGCATTG	CAATGCTTACAACACTCCGGCGAG
1055	AGCAATCATGAGAGGTGGCCGGTG	CACCGGCCACCTCTCATGATTGCT
1056	ATTTGCCACCGGCGACAAAAAGAT	ATCTTTTTGTCGCCGGTGGCAAAT
1057	CCGCCCGTGTTGGCATGTCTTTTG	CAAAAGACATGCCAACACGGGCGG
1058	ATCGGAAGTGCTGACTGACACACG	CGTGTGTCAGTCAGCACTTCCGAT
1059	CCTCAGACCCTATCTGGGTTGACG	CGTCAACCCAGATAGGGTCTGAGG
1060	CTGTGTGGTCTGGTCCGGCTGTTC	GAACAGCCGGACCAGACCACACAG
1061	GTCCCCATTATCGGTGAGTGCAAC	GTTGCACTCACCGATAATGGGGAC
1062	ACAGGCACGTAAGTGCTCAATCGG	CCGATTGAGCACTTACGTGCCTGT
1063	AGCAAGATAGCGGGAGTGCCCCTA	TAGGGGCACTCCCGCTATCTTGCT
1064	GGTTTACGCCATGACATCCCGTCA	TGACGGGATGTCATGGCGTAAACC
1065	GTGCAGGCCTTTGTGTGTGAATCG	CGATTCACACACAAAGGCCTGCAC
1066	CTTCGAGGGTAGGGCTTCGAAACG	CGTTTCGAAGCCCTACCCTCGAAG
1067	AGTCGACACTTGGGTTTACCACGG	CCGTGGTAAACCCAAGTGTCGACT
1068	ACATAAATCTCGCCCGCTGCACTC	GAGTGCAGCGGGCGAGATTTATGT
1069	GTTTGGTTTTCCACGGAGGTTTGA	TCAAACCTCCGTGGAAAACCAAAC
1070	GCAGGAACCAGATTAGTGTCCCGG	CCGGGACACTAATCTGGTTCCTGC
1071	TTTGCTAGAGCGCGGAGCTAAAGC	GCTTTAGCTCCGCGCTCTAGCAAA
1072	CTATGTGGCATCGCTGACATGCTC	GAGCATGTCAGCGATGCCACATAG
1073	CCTAAGTCGGTTTGCAGCTGCTCT	AGAGCAGCTGCAAACCGACTTAGG
1074	GCGTTCGTCCACAGGAACGGAAGG	CCTTCCGTTCCTGTGGACGAACGC
1075	TAACCCGCGCCCGAGAAATTGTCT	AGACAATTTCTCGGGCGCGGGTTA
1076	TATGGTGCTCAGAGCTGTTGCCAA	TTGGCAACAGCTCTGAGCACCATA
1077	TCATCGACCCACTAACGTCAGGGC	GCCCTGACGTTAGTGGGTCGATGA
1078	TGCTCAAGCTACGCGTCACTTCCC	GGGAAGTGACGCGTAGCTTGAGCA
1079	AGCGGGAAGGTCTGAGGAGGGAAA	TTTCCCTCCTCAGACCTTCCCGCT
1080	CCGATGTAGCACCACCGCAGTGGC	GCCACTGCGGTGGTGCTACATCGG
1081	AAGTTCTGGGAATCACACGGCGCG	CGCGCCGTGTGATTCCCAGAACTT
1082	CACCAGCCTTACGTGCGGCGTTAA	TTAACGCCGCACGTAAGGCTGGTG
1083	CGTTTCGCCTCCTCTTCCGAATGC	GCATTCGGAAGAGGAGGCGAAACG
1084	GAGGAGGCCAATAGAGCAGCGCGC	GCGCGCTGCTCTATTGGCCTCCTC
1085	AGTAATCTTGCGGCACACAAGCGG	CCGCTTGTGTGCCGCAAGATTACT
1086	TGAGGACAAACCGCGCGTAGGATA	TATCCTACGCGCGGTTTGTCCTCA
1087	TCGTAGAGACGCAGTGCCCATCTC	GAGATGGGCACTGCGTCTCTACGA
1088	CGAAGCTACACCCCGAGTGCGGTG	CACCGCACTCGGGGTGTAGCTTCG
1089	ATGATGTGATCTTCCCATGGCTGG	CCAGCCATGGGAAGATCACATCAT
1090	TGTACACGTATCGCGTTCGCCTAG	CTAGGCGAACGCGATACGTGTACA
1091	GGTGTGCTTTTACGCATGTACGCA	TGCGTACATGCGTAAAAGCACACC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1092	AGGCGGGATACGTGGATGCTAGCC	GGCTAGCATCCACGTATCCCGCCT
1093	AAATTAGGCACAGCCCTCCCACAG	CTGTGGGAGGGCTGTGCCTAATTT
1094	ATAAGTTTGGTGAGCCATTCGCGA	TCGCGAATGGCTCACCAAACTTAT
1095	CCTATTTCGGCGGACCTCGATGCC	GGCATCGAGGTCCGCCGAAATAGG
1096	TTACCGGAATATGCACTTGGCCGC	GCGGCCAAGTGCATATTCCGGTAA
1097	CCTCTCGGACGGTCCCTTTGATCG	CGATCAAAGGGACCGTCCGAGAGG
1098	CAAGCGAATGCTGTATTACGGCCT	AGGCCGTAATACAGCATTCGCTTG
1099	GCATTTCCCATGCCAGAACGTTGA	TCAACGTTCTGGCATGGGAAATGC
1100	GTTTTGGCTAACCGTCCTGCCTTG	CAAGGCAGGACGGTTAGCCAAAAC
1101	AGGTTTTGTCCGGGCGAATGATGT	ACATCATTCGCCCGGACAAAACCT
1102	ATGTCCACGAGTGCGTCCGATATC	GATATCGGACGCACTCGTGGACAT
1104	AATACCGTTCCCATCTGTGCGAGG	CCTCGCACAGATGGGAACGGTATT
1105	ACACAAGGTGCCTCATCGAATGGT	ACCATTCGATGAGGCACCTTGTGT
1106	GCCGGCAAAATCCTACAAAATCCA	TGGATTTTGTAGGATTTTGCCGGC
1107	CTTATCCCATGTGCCGGTCTGACT	AGTCAGACCGGCACATGGGATAAG
1108	GCGGCCATAATGCATAGCACGGAA	TTCCGTGCTATGCATTATGGCCGC
1109	TACGGTGCATCGCAGTATGGGTAA	TTACCCATACTGCGATGCACCGTA
1110	CACCAGATGTCGAGGATCATCGCC	GGCGATGATCCTCGACATCTGGTG
1111	GCTCCTACGCCCAAAGAGGTATGG	CCATACCTCTTTGGGCGTAGGAGC
1112	AGAATATGGGCAGCAGCAGCACTC	GAGTGCTGCTGCTGCCCATATTCT
1113	CTGCAGTCGCACGCAGTAGACCCG	CGGGTCTACTGCGTGCGACTGCAG
1114	ATGTCCCTGACCGGAATCTTTCCA	TGGAAAGATTCCGGTCAGGGACAT
1115	TTCGCCACGAGGCATTAGTCCGAC	GTCGGACTAATGCCTCGTGGCGAA
1116	ACGTCGTTCCCGAGAATACGGTCT	AGACCGTATTCTCGGGAACGACGT
1117	ATCCGCTGGCGCTTTGACGAAGAA	TTCTTCGTCAAAGCGCCAGCGGAT
1118	TGAACCAAATTCTTACCGCGTGGA	TCCACGCGGTAAGAATTTGGTTCA
1119	CACGCGTAGGCTGGTGTGTCATTC	GAATGACACACCAGCCTACGCGTG
1120	TCGATCCCGCGATCTGGCCTATTG	CAATAGGCCAGATCGCGGGATCGA
1121	GGAACACTCAACCACCGTGGATCT	AGATCCACGGTGGTTGAGTGTTCC
1122	TCACACACCAACTGGCCACAGATG	CATCTGTGGCCAGTTGGTGTGTGA
1123	TGTGCTTAGGACACCAGGCAACCC	GGGTTGCCTGGTGTCCTAAGCACA
1124	GACATTTAACCCGACCGATTGTGC	GCACAATCGGTCGGGTTAAATGTC
1125	GGCACCGAGCCAGTAGGCCTCTGA	TCAGAGGCCTACTGGCTCGGTGCC
1126	CTCAAGCGTGCATGTTGGTAACCA	TGGTTACCAACATGCACGCTTGAG
1127	AGGAAGGCCACCATCCAATATTCG	CGAATATTGGATGGTGGCCTTCCT
1128	TACGAACGCCAAGGTTATGCCAAT	ATTGGCATAACCTTGGCGTTCGTA
1129	CGCACCAGAGTTATGCAGGCTCAA	TTGAGCCTGCATAACTCTGGTGCG
1130	CCAGCTTGGACGAGGAAGGATGTG	CACATCCTTCCTCGTCCAAGCTGG
1131	GTCACGCCTTTCAAATGACCCACA	TGTGGGTCATTTGAAAGGCGTGAC
1132	TGCTAGACCCAGCCCGAGTCTCGG	CCGAGACTCGGGCTGGGTCTAGCA
1133	TATTGTGGCACTTGGGTCCAGTGC	GCACTGGACCCAAGTGCCACAATA
1134	CACGTGTGAGACCGGAAGTGCATC	GATGCACTTCCGGTCTCACACGTG
1135	GGCAGCCTGATGCTACAGCACCGT	ACGGTGCTGTAGCATCAGGCTGCC
1136	CGGTGCGTCCATCCTTCAGAGTTA	TAACTCTGAAGGATGGACGGACCG
1137	CTATTCGCGGACCCTACGCAGTTT	AAACTGCGTAGGGTCCGCGAATAG
1138	ACCTGTGCAGTCAGCACGAGTGCG	CGCACTCGTGCTGACTGCACAGGT
1139	GAGAACCACAGGTGGTCCACCCTA	TAGGGTGGACCACCTGTGGTTCTC
1140	CCTCGCTAGAGAAATCCACGGGAT	ATCCCGTGGATTTCTCTAGCGAGG
1141	TAACATCGGTGCAAACCGTGGCGC	GCGCCACGGTTTGCACCGATGTTA
1142	ACCCAGAAGACATGGCATTCGCCT	AGGCGAATGCCATGTCTTCTGGGT
1143	AAAAGCGCTGCTCTAACACCGCCG	CGGCGGTGTTAGAGCAGCGCTTTT
1144	CAAGTCTGTCCATTTCCCAACGGT	ACCGTTGGGAAATGGACAGACTTG
1145	CCGACACATGGTGGGCTTTTTAAG	CTTAAAAAGCCCACCATGTGTCGG
1146	ACAGACCAGCTTTTTGCGCAGATT	AATCTGCGCAAAAAGCTGGTCTGT
1147	CGGCGATCCATTTCACTTCAAAGT	ACTTTGAAGTGAAATGGATCGCCG
1148	GACGTTATCATGACACAGGTCGCG	CGCGACCTGTGTCATGATAACGTC
1149	GGCAGAGTTGGATCGGATCCTCAA	TTGAGGATCCGATCCAACTCTGCC
1150	CCTCAATGCCACCGAATTCGGTAT	ATACCGAATTCGGTGGCATTGAGG
1151	GGAGTTAGCGTGATTAGTCGCCCA	TGGGCGACTAATCACGCTAACTCC
1152	GAACTCGACGTGTCACGGAAGGGT	ACCCTTCCGTGACACGTCGAGTTC
1153	CACAAGCGACATTTCTGGTGCACG	CGTGCACCAGAAATGTCGCTTGTG
1154	CCAGAATGCGTGAATTCGCGTCCT	AGGACGCGAATTCACGCATTCTGG
1155	CAAGGGAGCCCTGCGAATTAGAGT	ACTCTAATTCGCAGGGCTCCCTTG
1156	ATTCTTGCTTCGGACGACTAGCCG	CGGCTAGTCGTCCGAAGCAAGAAT
1157	TGCCACTTTGATTTCCAGATTGCC	GGCAATCTGGAAATCAAAGTGGCA
1158	GATGGTCGGCAGATAAGTGGTGGG	CCCACCACTTATCTGCCGACCATC
1159	GTTCACACGGGTTGACCAACATGT	ACATGTTGGTCAACCCGTGTGAAC
1160	GATTCAATTGCCCCATTCCTGCAT	ATGCAGGAATGGGGCAATTGAATC
1161	TACCGGAAACTGAGCCTCGTGCTA	TAGCACGAGGCTCAGTTTCCGGTA
1162	GGATCTTTACTCAGGGGCAGAGCC	GGCTCTGCCCCTGAGTAAAGATCC
1163	CGCGAGTGCTTTGTTCTGTGTGGA	TCCACACAGAACAAAGCACTCGCG
1164	GTCGTCGCGATGGCGTACATCCTT	AAGGATGTACGCCATCGCGACGAC
1165	ACGGGAATCTCCCGAAGTGCGAGC	GCTCGCACTTCGGGAGATTCCCGT
1166	GGTCGAAATGAGCCAGCAGCAGAT	ATCTGCTGCTGGCTCATTTCGACC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1167	CCATTGGAATACTGCGTGCGGCTT	AAGCCGCACGCAGTATTCCAATGG
1168	GGAAGACTTCGCGAGGGCACAATG	CATTGTGCCCTCGCGAAGTCTTCC
1169	AGGGTGACTTCGAAGGTCCGAACT	AGTTCGGACCTTCGAAGTCACCCT
1170	TCGTCCCTCTGGTGGTCGAATCAC	GTGATTCGACCACCAGAGGGACGA
1171	TGTGCAAATTATGCTGGGCGTGAG	CTCACGCCCAGCATAATTTGCACA
1172	GTCGCCAACTGTCATGTGTGCCCA	TGGGCACACATGACAGTTGGCGAC
1173	CCTCGAACCCTCAAGACGAAACGA	TCGTTTCGTCTTGAGGGTTCGAGG
1174	CTTCATCACGTGACCTTTGTTGCC	GGCAACAAAGGTCACGTGATGAAG
1175	CGTTCATTCCCAGCAGGATGGCTT	AAGCCATCCTGCTGGGAATGAAGG
1176	CGGGGACCTCAATGGAGCGTCTTA	TAAGACGCTCCATTGAGGTCCCCG
1177	CGCCTCTAGCGCTTGTTACGTCGA	TCGACGTAACAAGCGCTAGAGGCG
1178	CTGCCAGACTCAAAACAGGGACGG	CCGTCCCTGTTTTGAGTCTGGCAG
1179	CTCCTTACACCGTGTGAGGGAACC	GGTTCCCTCACACGGTGTAAGGAG
1180	TTTCATGCCATATCGCCTCGCGCA	TGCGCGAGGCGATATGGCATGAAA
1181	GTCTGACTGTCTGCCCTGTATGCG	CGCATACAGGGCAGACAGTCAGAC
1182	GGTTAATGGAACGGCGTTAACGCG	CGCGTTAACGCCGTTCCATTAACC
1183	CTTCGCACTGCGGAATCTCAAGCT	AGCTTGAGATTCCGCAGTGCGAAG
1184	TGCCAGAGGCGTAGGAGTCCTGGA	TCCAGGACTCCTACGCCTCTGGCA
1185	GACGGGCGAGCCAGTATTAACTCA	TGAGTTAATACTGGCTCGCCCGTC
1186	GACCTCCAAAGTCAGTCTTGGCGG	CCGCCAAGACTGACTTTGGAGGTC
1187	CGTTAGAGCATGACCGAACACGTC	GACGTGTTCGGTCATGCTCTAACG
1188	GTGGGCTCAAAAATTGGGTACGCC	GGCGTACCCAATTTTTGAGCCCAC
1189	GGGGCAGAGATCACGCGTTCCTCT	AGAGGAACGCGTGATCTCTGCCCC
1190	TTTCGCCCTACGAAGCGAAGTTTC	GAAACTTCGCTTCGTAGGGCGAAA
1191	TACGGGGTGATGTTAAGCTACGCG	CGCGTAGCTTAACATCACCCCGTA
1192	CCTGTGAGTCTGAGATCGCCGTGT	ACACGGCGATCTCAGACTCACAGG
1193	ACTGAAGCTGGAACAGGCCATTCG	CGAATGGCCTGTTCCAGCTTCAGT
1194	AGCACTGGTTCACATGGGAGTCCA	TGGACTCCCATGTGAACCAGTGCT
1195	TAAGGAAGATCACACTCCCTGCGC	GCGCAGGGAGTGTGATCTTCCTTA
1196	CACCACACGCTAAAATTGAAGCCG	CGGCTTCAATTTTAGCGTGTGGTG
1197	GCTGTCGCCAGGATCATGTATCGT	ACGATACATGATCCTGGCGACAGC
1198	TTCGTTCGTGCACTGGATTCTTGA	TCAAGAATCCAGTGCACGAACGAA
1199	TCAGCTCTCCTTGTGCTTGCAGTG	CACTGCAAGCACAAGGAGAGCTGA
1200	ACGACGAGGTGAACTTCGTGGGAA	TTCCCACGAAGTTCACCTCGTCGT
1201	AGCATTGCCGCGGGCCTTGGTTTA	TAAACCAAGGCCCGCGGCAATGCT
1202	CAGAGGGCAGATGTGACTCCTCAA	TTGAGGAGTCACATCTGCCCTCTG
1203	CGATATTTCAGCCTCTCAAACGCG	CGCGTTTGAGAGGCTGAAATATCG
1204	TGCCAGAAATGTTGCCGATTCGAA	TTCGAATCGGCAACATTTCTGGCA
1205	TAGGCCACCCGGTGTTCACAATTC	GAATTGTGAACACCGGGTGGCCTA
1206	GAGAGTCAGACCGAGGGACACGAG	CTCGTGTCCCTCGGTCTGACTCTC
1207	GAGGCGATCCTGGAACCACGCAAC	GTTGCGTGGTTCCAGGATCGCCTC
1208	CCAGAGAGGCGGGCTACTGACTCA	TGAGTCAGTAGCCCGCCTCTCTGG
1209	CACACAGTCCCATCGTACGGCAGT	ACTGCCGTACGATGGGACTGTGTG
1210	TTACGTTGCGGAAGCGTGCCTCTA	TAGAGGCACGCTTCCGCAACGTAA
1211	ATGTACACGCTGCAATCGTGTCCC	GGGACACGATTGCAGCGTGTACAT
1212	ACTCGTCGTCGGAAGCGCCCAGGT	ACCTGGGCGCTTCCGACGACGAGT
1213	ATGCGAGAGCAGAATTGAGCCGGT	ACCGGCTCAATTCTGCTCTCGCAT
1214	AAGTTGGTTCGTATTCACGCGTGC	GCACGCGTGAATACGAACCAACTT
1215	TGGGCTTATCGCCGAAGATTGCTA	TAGCAATCTTCGGCGATAAGCCCA
1216	CAACGGCGAAGACCCAGAATTTTA	TAAAATTCTGGGTCTTCGCCGTTG
1217	AGCGTACGGCGAAAGTCTAGGGAC	GTCCCTAGACTTTCGCCGTACGCT
1218	ATGCATCCAGCGTCCCCTTGATTA	TAATCAAGGGGACGCTGGATGCAT
1219	ACCGTCATCAGTCGCAGGCTTCTG	CAGAAGCCTGCGACTGATGACGGT
1220	TCTTGACGGCTGGGCATGNTTGGA	TCCAATCATGCCCAGCCGTCAAGA
1221	TTAACATTCGGACCCAGGACCTGG	CCAGGTCCTGGGTCCGAATGTTAA
1222	TGGTGTCGAACTCCCTTGCGTGTT	AACACGCAAGGGAGTTCGACACCA
1223	TACTCCAGTCGCCTGCGCGCAATC	GTTTGCGCGCAGGCGACTGGAGTA
1224	CGCAATGCCGTAAGCATGCCAAGC	GCTTGGCATGCTTACGGCATTGCG
1225	AGTCCGCGCGAAATACGAACAGTA	TACTGTTCGTATTTCGCGCGGACT
1226	ATGTTGCACGCGCACTGTATCACA	TGTGATACAGTGCGCGTGCAACAT
1227	ATCGCCTAACTACCCGCGGCGTGC	GCACGCCGCGGGTAGTTAGGCGAT
1228	TGGCCAGGGAACACAAGCTCGGTA	TACCGAGCTTGTGTTCCCTGGCCA
1229	AAACATGGGTCGCGTCTGAGATCA	TGATCTCAGACGCGACCCATGTTT
1230	GCGAGAGCTGCGATTCCCTTTTAG	CTAAAAGGGAATCGCAGCTCTCGC
1231	CCGGCCAAACAAGAGACGAGCGGA	TCCGCTCGTCTCTTGTTTGGCCGG
1232	AATGGGGCACAGTCTCGCTTGACA	TGTCAAGCGAGACTGTGCCCCATT
1233	TGTCTCGGGCCTTCAGGACACACT	AGTGTGTCCTGAAGGCCCGAGACA
1234	TCCACCTTCATTAAGTGGTTCGGC	GCCGAACCACTTAATGAAGGTGGA
1235	GCTTCGGAATCATCCACCTGTCAT	ATGACAGGTGGATGATTCCGPAGC
1236	GAGCCGATGGGCTATCGTCGTCGG	CCGACGACGATAGCCCATCGGCTC
1237	CACGAATTACGCACGCACAGAGGA	TCCTCTGTGCGTGCGTAATTCGTG
1238	GCTGTGACGCTCCCCTCAACTAGG	CCTAGTTGAGGGGAGCGTCACAGC
1239	CGCTCTGAAAACGCGGGCTACGTT	AACGTAGCCCGCGTTTTCAGAGCG
1240	GAGTGCTGGACACCGTAGCCAGGA	TCCTGGCTACGGTGTCCAGCACTC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1241	CCAACCCCAGTGTAGGCGCAAATG	CATTTGCGCCTACACTGGGGTTGG
1242	GAAGTAGGGGATGTTGGCCGGCGG	CCGCCGGCCAACATCCCCTACTTC
1243	CAACGTGGGCACCTGTTTTAGCAG	CTGCTAAAACAGGTGCCCACGTTG
1244	CTAGCTGCGATCCGAACCTCTACG	CGTAGAGGTTCGGATCGCAGCTAG
1245	CATTGAACCATCAGCCAAGCTGCG	CGCAGCTTGGCTGATGGTTCAATG
1246	AGACTGGCAATTTTTCGAGGCCAA	TTGGCCTCGAAAAATTGCCAGTCT
1247	CTGGCCGTCCATGAGTTGGTCCAG	CTGGACCAACTCATGGACGGCCAG
1248	CATGCTGAAACACGGGATTGCCAT	ATGGCAATCCCGTGTTTCAGCATG
1249	CGATATGTAAGACAGCCGTCGCAA	TTGCGACGGCTGTCTTACATATCG
1250	AGCGTAACCTACTGGGAAGGCACC	GGTGCCTTCCCAGTAGGTTACGCT
1251	GTTCGAACCCCGCGATGTTAAATG	CATTTAACATCGCGGGGTTCGAAC
1252	GTTGTTAGGAGGCTCGAGGCTGCT	AGCAGCCTCGAGCCTCCTAACAAC
1253	ACTGGTGCTACGCGGGATATTTGA	TCAAATATCCCGCGTAGCACCAGT
1254	CTGGGAGCTATCCTCAGCCGAATC	GATTCGGCTGAGGATAGCTCCCAG
1255	GAACTCGCCGCTGCCGAAGGGTAG	CTACCCTTCGGCAGCGGCGAGTTC
1256	TTCGATCGAGGAGCAAGGAGAGTC	GACTCTCCTTGCTCCTCGATCGAA
1257	GGGGAAAATTGAGGCCTTAGCCAT	ATGGCTAAGGCCTCAATTTTCCCC
1258	CTAAGGTCAAAGCGCTGTCGCCAG	CTGGCGACAGCGCTTTGACCTTAG
1259	CCGTAGCGGTGCTCGACCAGGTTC	GAACCTGGTCGAGCACCGCTACGG
1260	TGGGGACGAATCCGAATGTAGTGA	TCACTACATTCGGATTCGTCCCCA
1261	GTCATGTAATTGCATCCCACGGGT	ACCCGTGGGATGCAATTACATGAC
1262	CTTTGCGCGGTGGTCAATAAAAAG	CTTTTTATTGACCACCGCGCAAAG
1263	CTCGGGGATGCCCTCTTGGCATTA	TAATGCCAAGAGGGCATCCCCGAG
1264	CGAAACGTGGTGCAGAAACCTGAA	TTCAGGTTTCTGCACCACGTTTCG
1265	GGAGTTCACGAGTCGAGCAGTCGC	GCGACTGCTCGACTCGTGAACTCC
1266	AGCCGTTTTCAAAGATCTCGACGA	TCGTCGAGATCTTTGAAAACGGCT
1267	TGGCTGGACATTGTCTGCAATGCA	TGCATTGCAGACAATGTCCAGCCA
1268	ATCGGCTGCCTCAGTCCCTAATTT	AAATTAGGGACTGAGGCAGCCGAT
1269	CCAGCATGGAGTTAAGTGAGCGCG	CGCGCTCACTTAACTCCATGCTGG
1270	TTCATATTTACGAATGCCGGGTGC	GCACCCGGCATTCGTAAATATGAA
1271	CGAAATCGCACAGGAATTCGCGTC	GACGCGAATTCCTGTGCGATTTCG
1272	GGCAATTTCGGGACACTCGTTTCA	TGAAACGAGTGTCCCGAAATTGCC
1273	TTTGTGATTGGGGGTATAACCCGA	TCGGGTTATACCCCCAATCACAAA
1274	CCCAGCTAATCCAGCTTGGGCTGT	ACAGCCCAAGCTGGATTAGCTGGG
1275	AAAATCGTTTGGCTGTAACGTCGC	GCGACGTTACAGCCAAACGATTTT
1276	AGGAGATTCATCGACTTCCGGGAA	TTCCCGGAAGTCGATGAATCTCCT
1277	GCACGGGGTCTCAATGCTTAGGGT	ACCCTAAGCATTGAGACCCCGTGC
1278	GCGCAACAAGTAGCCTACCGAGGC	GCCTCGGTAGGCTACTTGTTGCGC
1279	TAGCAGGCTGATGCCGTCTACACA	TGTGTAGACGGCATCAGCCTGCTA
1280	GCAAGCGGCGATCGTACAACTTGT	ACAAGTTGTACGATCGCCGCTTGC
1281	GCACCTCTGGTAAGCCTGAAAGGG	CCCTTTCAGGCTTACCAGAGGTGC
1282	CGAGGGCGGTGAGTGCATACCGTG	CACGGTATGCACTCACCGCCCTCG
1283	GGATTAACCGGAACTGCCCTTCTG	CAGAAGGGCAGTTCCGGTTAATCC
1284	GATATTGGGTCCGGCGCGCATTAC	GTAATGCGCGCCGGACCCAATATC
1285	GGCCTTTAATCTCCGGTCGCAATG	CATTGCGACCGGAGATTAAAGGCC
1286	AACCTTAGTGCGGCTAGGTGGGGT	ACCCCACCTAGCCGCACTAAGGTT
1287	CACGCTGACGCCAGTGTGGTGAGG	CCTCACCACACTGGCGTCAGCGTG
1288	GGTTCCCTTGACCCACCGAATTGA	TCAATTCGGTGGGTCAAGGGAACC
1289	TTCTGACAACATCGACCCTGGCTC	GAGCCAGGGTCGATGTTGTCAGAA
1290	GCGAGCGAAGATAATCCCCAAACT	AGTTTGGGGATTATCTTCGCTCGC
1291	GTACTCTGTGCAACGGTCCCGAGT	ACTCGGGACCGTTGCACAGAGTAC
1292	ACACGCCAGGAACAGTGTCTGTGA	TCACAGACACTGTTCCTGGCGTGT
1293	AAGGGAATTTAGCGCGCGTGACTT	AAGTCACGCGCGCTAAATTCCCTT
1294	TGACGTACGCGTTTTAAGTGGGGA	TCCCCACTTAAAACGCGTACGTCA
1295	CTTAGAGGGACGAGGCCATGAATG	CATTCATGGCCTCGTCCCTCTAAG
1296	GGACGACTCCGCAAAAAAGGTCGT	ACGACCTTTTTTGCGGAGTCGTCC
1297	TCAATCCCAACATCCAAAGCCTCA	TGAGGCTTTGGATGTTGGGATTGA
1298	GCACTGGTCTACCAAGCTTGTCCC	GGGACAAGCTTGGTAGACCAGTGC
1299	ACTTGTCGGAAACGAGACCGAGCA	TGCTCGGTCTCGTTTCCGACAAGT
1300	TCAGGAAAGGCCTAAAGGCGAAAG	CTTTCGCCTTTAGGCCTTTCCTGA
1301	GGAATGTAGTCAAGGAGGACGGGG	CCCCGTCCTCCTTGACTACATTCC
1302	GCACGTGGTAAATGAATTGGCGAG	CTCGCCAATTCATTTACCACGTGC
1303	GATCATCAGGGGTTATGCGTCGCG	CGCGACGCATAACCCCTGATGATC
1304	CTCACTCATTCTGATTGCCCGCGG	CCGCGGGCAATCAGAATGAGTGAG
1305	GGGGTGATCTCTCGAACGTCACCC	GGGTGACGTTCGAGAGATCACCCC
1306	AAGGTTGCTGCTAGCGTACCTCGA	TCGAGGTACGCTAGCAGCAACCTT
1307	TATAGATCGCCCAACAGGCAGGAG	CTCCTGCCTGTTGGGCGATCTATA
1308	GTTTGGACCTGTTGGGAGTGGGCA	TGCCCACTCCCAACAGGTCCAAAC
1309	ATTGGGGAAAACCCGGTCTCAAGG	CCTTGAGACCGGGTTTTCCCCAAT
1310	TCGACGATAAAGTGCTCACGGGAC	GTCCCGTGAGCACTTTATCGTCGA
1311	CGATAGAATTCAATGCAGGGCGGA	TCCGCCCTGCATTGAATTCTATCG
1312	CGGTTCGCTACGGCGGCTGGTTTC	GAAACCAGCCGCCGTAGCGAACCG
1313	CCAGGTTTCGGTTAGTCGCGCTAG	CTAGCGCGACTAACCGAAACCTGG
1314	ACGACCTTACACTCGGATCCGACG	CGTCGGATCCGAGTGTAAGGTCGT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1315	TCGCGTTAAATGGACCAAGGGGCC	GGCCCCTTGGTCCATTTAACGCGA
1316	CCAGAAAGAAAATGGCGCCCGGAT	ATCCGGGCGCCATTTTCTTTCTGG
1317	GATACATCGCCGCCTGCTAGGCAC	GTGCCTAGCAGGCGGCGATGTATC
1318	GAGATCACACTCGGAAACCGGATG	CATCCGGTTTCCGAGTGTGATCTC
1319	ACTTCGCGGAAAAAGGCTGGCATT	AATGCCAGCCTTTTTCCGCGAAGT
1320	CCGAGCTGCACGAGCACACAAAGT	ACTTTGTGTGCTCGTGCAGCTCGG
1321	TTCCACAAGGCGGCATAGTGAGGC	GCCTCACTATGCCGCCTTGTGGAA
1322	AGCAAACTGGAATCCGGAAAAACC	GGTTTTTCCGGATTCCAGTTTGCT
1323	CGCTATGTCGCAGCATGCATTTAC	GTAAATGCATGCTGCGACATAGCG
1324	AGTCACGCCCAACGTCGGTTCTTT	AAAGAACCGACGTTGGGCGTGACT
1325	AGTGGGCGCACTTGGCCTTAAATA	TATTTAAGGGGAAGTGCGCCCACT
1326	ACTTGCAACTTCGGCCGTTTGACT	AGTCAAACGGCCGAAGTTGCAAGT
1327	CAAACATCAGGTTCATGCCGTACG	CGTACGGCATGAACCTGATGTTTG
1328	AGCGTGACCACCCTACAATGGCAA	TTGCCATTGTAGGGTGGTCACGCT
1329	GCAGGCATCCGGCAGAGATGTCTC	GAGACATCTCTGCCGGATGCCTGC
1330	GAGCGGCTAAGAGGCCAGACCAAA	TTTGGTCTGGCCTCTTAGCCGCTC
1331	CACAGAACAGGGTGTTTCCCGCTA	TAGCGGGAAACACCCTGTTCTGTG
1332	ACTTTGCAGAAGGCCCAACACAAG	CTTGTGTTGGGCCTTCTGCAAAGT
1333	CCTTCCTGGTACTTTGTGGGCGAC	GTCGCCCACAAAGTACCAGGAAGG
1334	CTACATGCTCACCCCACCAGAGTG	CACTCTGGTGGGGTGAGCATGTAG
1335	ATTTTCAGAATAGCCCCGCCTCGA	TCGAGGCGGGGCTATTCTGAAAAT
1336	CAATTGCTACGTTGACGCCCTCTG	CAGAGGGCGTCAACGTAGCAATTG
1337	CTGTCGCCTAATCCTCGGTGGCCG	CGGCCACCGAGGATTAGGCGACAG
1338	TTTGTGTTGGCTCCGTACATTGGA	TCCAATGTACGGAGCCAACACAAA
1339	ACGTGACGGGAAGGTGGTTGAATC	GATTCAACCACCTTCCCGTCACGT
1340	AGTTCTTGCGTTGCACGAAACAGA	TCTGTTTCGTGCAACGCAAGAACT
1341	GCTCGCCGCGCGTCTTTATGTCTG	CAGACATAAAGACGCGCGGCGAGC
1342	ATGAACATCGCGAGGCAAGCCTTT	AAAGGCTTGCCTCGCGATGTTCAT
1343	CAACCGCGCCCACCAACATTAAGG	CCTTAATGTTGGTGGGCGCGGTTG
1344	TGATCGAGGACGGCTTGGTAGCCT	AGGCTACCAAGCCGTCCTCGATCA
1345	GGAGGCATGCCTTCCGAGAGCAAC	GTTGCTCTCGGAAGGCATGCCTCC
1346	CACCGATCCTCAACGCAATTGCTA	TAGCAATTGCGTTGAGGATCGGTG
1347	GGCCATGAATTGGGAAATCCATGT	ACATGGATTTCCCAATTCATGGCC
1348	CTGTTCCAGGCGTAACCAGCGGGC	GCCCGCTGGTTACGCCTGGAACAG
1349	TATGTCTGGCTCGCCATCAGAAGA	TCTTCTGATGGCGAGCCAGACATA
1350	GGAGTGACCAGCACAAGCATCGAG	CTCGATGCTTGTGCTGGTCACTCC
1351	TCGGACTGGAAGTAACTCGCATGA	TCATGCGAGTTACTTCCAGTCCGA
1352	GTAGGGTCAAGCACGATTGAAGCC	GGCTTCAATCGTGCTTGACCCTAC
1353	CACCGGCGGTTCGACTAACGTGAC	GTCACGTTAGTCGAACCGCCGGTG
1354	GAATGACGCGCAGTGCATTTGAAC	GTTCAAATGCACTGCGCGTCATTC
1355	GTGCTCGTCTAACCGCGGATAGAG	CTCTATCCGCGGTTAGACGAGCAC
1356	GCGGACCTGGGTTAATTGACGCGC	GCGCGTCAATTAACCCAGGTCCGC
1357	TTTTTGATGTTGCGCACCGGGCTA	TAGCCCGGTGCGCAACATCAAAAA
1358	TTGCGTCAGCGCATCTGCTCGATT	AATCGAGCAGATGCGCTGACGCAA
1359	ATGAGCACGCCAGTTCGTTCCTTT	AAAGGAACGAACTGGCGTGCTCAT
1360	TCAACGGTAAAGAATCGCCCCGCA	TGCGGGGCGATTCTTTACCGTTGA
1361	CGCGATTGACTGAACCACACCTCT	AGAGGTGTGGTTCAGTCAATCGCG
1362	GCGTGAAAGATGACGGCCGGTATA	TATACCGGCCGTCATCTTTCACGC
1363	CATGATTCCACCTCGATCGGCTAG	CTAGCCGATCGAGGTGGAATCATG
1364	CTACGACAAAGCAACCGTGCAAAA	TTTTGCACGGTTGCTTTGTCGTAG
1365	ATGCCGTGTTCATCTTGATGGTCC	GGACCATCAAGATGAACACGGCAT
1366	TTCGTGGAGGGACTTTGGAGATCC	GGATCTCCAAAGTCCCTCCACGAA
1367	GAAGCGCCGTAACGTACACCGTCG	CGACGGTGTACGTTACGGCGCTTC
1368	AGCGTGCGCTTGGCTATAAGGCTA	TAGCCTTATAGCCAAGCGCACGCT
1369	ACAGTCAGGAGTAACGCCGCTCAA	TTGAGCGGCGTTACTCCTGACTGT
1370	TTTAGCCGCTGCGACTGTAGGAAA	TTTCCTACAGTCGCAGCGGCTAAA
1371	ACTGTGTCGCAATCAACCCGCAAA	TTTGCGGGTTGATTGCGACACAGT
1372	TGCAGCCAATGCGGAACTTAGAGG	CCTCTAAGTTCCGCATTGGCTGCA
1373	CCCGCTATCCCGGTCTTGCAGTTC	GAACTGCAAGACCGGGATAGCGGG
1374	GAGGGCGCAACATATGCAGTGCTG	CAGCACTGCATATGTTGCGCCCTC
1375	CGTACGGACATCGATGACGCAACG	CGTTGCGTCATCGATGTCCGTACG
1376	AGTCTCCCGAGAAACGCATAAGGC	GCCTTATGCGTTTCTCGGGAGACT
1377	AGGAAGTGGATGAACGCGGCTGCA	TGCAGCCGCGTTCATCCACTTCCT
1378	GGGTTGCTCACCCTCGTCATCAGG	CCTGATGACGAGGGTGAGCAACCC
1379	TAGGAATGCGAGTTCCGGCGGTAA	TTACCGCCGGAACTCGCATTCCTA
1380	CTCCTCACTTCCAAGCTGCGGATA	TATCCGCAGCTTGGAAGTGAGGAG
1381	TCAATAGCACCTAGCATGCTCCCG	CGGGAGCATGCTAGGTGCTATTGA
1382	TGATTCCTGCGCTTTCACAGGTCG	CGACCTGTGAAAGCGCAGGAATCA
1383	GTATGTGCGGGATGGAAATCACGC	GCGTGATTTCCATCCCGCACATAC
1384	TACGGCAACTGTCGATACGAGGGC	GCCCTCGTATCGACAGTTGCCGTA
1385	GGTTCCCTATCCAGCACTCCTCGC	GCGAGGAGTGCTGGATAGGGAACC
1386	ATAAGCGCGCCACAGGTATGTACC	GGTACATACCTGTGGCGCGCTTAT
1387	GAAAGTCGCCAACAGACTCGAGCA	TGCTCGAGTCTGTTGGCGACTTTC
1388	CGCTAATGCCTCATAGGCGTGTGC	GCACACGCCTATGAGGCATTAGCG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1389	ATCCCCGCCGCACGAAGTACCAAG	CTTGGTACTTCGTGCGGCGGGGAT
1390	GACGCTGCTGATGGCTTTATCGAT	ATCGATAAAGCCATCAGCAGCGTC
1391	CTCTCCCCGTCGCTTCAGAGATTA	TAATCTCTGAAGCGACGGGGAGAG
1392	TCATGTGGGCCGTCGTATCAGTTT	AAACTGATACGACGGCCCACATGA
1393	GGCCTGAAGGTGAATGGTTACGTG	CACGTAACCATTCACCTTCAGGCC
1394	AGCCTCCAAAGCCGGTAGAGTTCC	GGAACTCTACCGGCTTTGGAGGCT
1395	TTGTCGTAGGCGCTCACCTTAGGA	TCCTAAGGTGAGCGCCTACGACAA
1396	GCCTGAGTCCGGGTCGGGAAAGAA	TTCTTTCCCGACCCGGACTCAGGC
1397	GGCACTATACCGGTTCTGGACGCG	CGCGTCCAGAACCGGTATAGTGCC
1398	CCGTGTATACGGAAAGGTACGCCA	TGGCGTACCTTTCCGTATACACGG
1399	CCCAAGGCAAGTGTGCATCAGTCC	GGACTGATGCACACTTGCCTTGGG
1400	GGAGTGCATCATGGCCAAATCTGG	CCAGATTTGGCCATGATGCACTCC
1401	CCATGTTACGTCTGCGCACCACAG	CTGTGGTGCGCAGACGTAACATGG
1402	GGCGTTGAGCTTAAAAGCAGCGAC	GTCGCTGCTTTTAAGCTCAACGCC
1403	TTGGCACTCTGCAAGATACGTGGG	CCCACGTATCTTGCAGAGTGCCAA
1404	GATCTGCACTGCAAGGTCTTGGGG	CCCCAAGACCTTGCAGTGCAGATC
1405	CGATCAACTTGCGGCCATTCCTGC	GCAGGAATGGCCGCAAGTTGATCG
1406	CGGCTGGGGTCACAGAAACGAGTA	TACTCGTTTCTGTGACCCCAGCCG
1407	GCGGCTAGTTGTACCTAGCGGCTG	CAGCCGCTAGGTACAACTAGCCGC
1408	TCGTCACTGTTAGAGAGGCCTCCG	CGGAGGCCTCTCTAACAGTGACGA
1409	AGTGTCGTGAGCCCTAGCGGCGCT	AGCGCCGCTAGGGCTCACGACACT
1410	AGGACGCAGGGATTCAAGTGCAAC	GTTGCACTTGAATCCCTGCGTCCT
1411	ACCGATGCGCGGTCGGTCTCATAC	GTATGAGACCGACCGCGCATCGGT
1412	GGCAGAGGGTTAGGGGGTTTTTTT	AAAAAAACCCCCTAACCCTCTGCC
1413	GGCAAAGGGTGTTTATGGGAGACC	GGTCTCCCATAAACACCCTTTGCC
1414	ACAAGGCTTCGGCTGGCAGAATAC	GTATTCTGCCAGCCGAAGCCTTGT
1415	CATATCCGTTCCTATCGCCAGACG	CGTCTGGCGATAGGAACGGATATG
1416	AAGCCTTTGTGGCCAAGGCCGCGT	ACGCGGCCTTGGCCACAAAGGCTT
1417	CCGAACCATGGCTTTATCCAGTGT	ACACTGGATAAAGCCATGGTTCGG
1418	GTTCAGCAGTAGCTCCCTCCTCGA	TCGAGGAGGGAGCTACTGCTGAAC
1419	GCGCAGTGACACCATGATGCTTTC	GAAAGCATCATGGTGTCACTGCGC
1420	ACGATCCATTTTGCCAGCATGCAA	TTGCATGCTGGCAAAATGGATCGT
1421	TCCCTTCATTTCGGGTTTTTAGCC	GGCTAAAAACCCGAAATGAAGGGA
1422	TCTTCTTGCCCACATTCCCTTTTG	CAAAAGGGAATGTGGGCAAGAAGA
1423	TGCCTTTTGATTGGTGGTCACGGT	ACCGTGACCACCAATCAAAAGGCA
1424	GACCCTCACGGTCATCAGAGGGAG	CTCCCTCTGATGACCGTGAGGGTC
1425	CCGTTCAACACAGTGATACACGCG	CGCGTGTATCACTGTGTTGAACGG
1426	CACCAGGGGATAGGTGCGGTACGC	GCGTACCGCACCTATCCCCTGGTG
1427	GGTCGGAACTGATCTGTGCGATCC	GGATCGCACAGATCAGTTCCGACC
1428	TGCTCCTTCCTAGGGTCATCCGTG	CACGGATGACCCTAGGAAGGAGCA
1429	GTGGACTTTGACGCCGGCTACCGC	GCGGTAGCCGGCGTCAAAGTCCAC
1430	CTGATCTGTCGGCGGTTACTTGCC	GGCAAGTAACCGCCGACAGATCAG
1431	AGAGGAGCGGAAAAAACCGGACGA	TCGTCCGGTTTTTTCCGCTCCTCT
1432	GCGACGAAGAGATCCAGCAAGCTC	GAGCTTGCTGGATCTCTTCGTCGC
1433	GGGACTTCCAGCTGAGGGACGAAA	TTTCGTCCCTCAGCTGGAAGTCCC
1434	GGCGCACTCCAATACCCACTGTTT	AAACAGTGGGTATTGGAGTGCGCC
1435	GCGCTTGGAGACTGTCAGGACGTG	CACGTCCTGACAGTCTCCAAGCGC
1436	CAAACCGCTGGTTTCTCCACCTGT	ACAGGTGGAGAAACCAGCGGTTTG
1437	GCGATTGCTTGGGATCGGTGACTA	TAGTCACCGATCCCAAGCAATCGC
1438	CTCAGCGACATTTTTCTGGTGGCG	CGCCACCAGAAAAATGTCGCTGAG
1439	CAGCGGCGTCGTTTACTCAGGACT	AGTCCTGAGTAAACGACGCCGCTG
1440	GACAGCCGTGAACGCTCAGCCGTT	AACGGCTGAGCGTTCACGGCTGTC
1441	GGGCCGTAGAGGCATCGGGTAAAG	CTTTACCCGATGCCTCTACGGCCC
1442	CGCCGCTCACCTGCTTAAAGCATT	AATGCTTTAAGCAGGTGAGCGGCG
1443	TGCCAAATCGCAACTCTTGAGACA	TGTCTCAAGAGTTGCGATTTGGCA
1444	CCCCGATCGGGTGTAATTCTCCCT	AGGGAGAATTACACCCGATCGGGG
1445	CAAGGTCCAGGTGACGCAACCACT	AGTGGTTGCGTCACCTGGACCTTG
1446	CGAGCCTTCAGTGGTATGCATGCG	CGCATGCATACCACTGAAGGCTCG
1447	CAGCAGCGTGCCCATCTCGACTTA	TAAGTCGAGATGGGCACGCTGCTG
1448	CGGACCAAGATGGCAGTAATCCAG	CTGGATTACTGCCATCTTGGTCCG
1449	CTACCACGCTCTGCGCGGGCTGTA	TACAGCCCGCGCAGAGCGTGGTAG
1450	ACGTGGTTAGGCATGAGCTGCGTC	GACGCAGCTCATGCCTAACCACGT
1451	CGACATATCCGACATGACCGGATG	CATCCGGTCATGTCGGATATGTCG
1452	GCGCCCAGGCTGTGTTAGAAAATA	TATTTTCTAACACAGCCTGGGCGC
1453	AGCTGGGACTCCGGACCTTGAGTG	CACTCAAGGTCCGGAGTCCCAGCT
1454	CGGTCGTAACCGCTGCTACAACTT	AAGTTGTAGCAGCGGTTACGACCG
1455	TCGTTCCTCTGGAACAATTCAGCA	TGCTGAATTGTTCCAGAGGAACGA
1456	CGGCATCTCCGGACAAAGGTTAAC	GTTAACCTTTGTCCGGAGATGCCG
1457	TATCTTGTCGAGCGCCACTCGGAG	CTCCGAGTGGCGCTCGACAAGATA
1458	TGCAAGGGAGAAAGCCCCATGAGC	GCTCATGGGGCTTTCTCCCTTGCA
1459	ACTGCATAGCCCAGATCCGCTTGC	GCAAGCGGATCTGGGCTATGCAGT
1460	TGTGATTCAGTCGAAGCAAGGCCG	CGGCCTTGCTTCGACTGAATCACA
1461	CATCCATCTACAATTCGGGCCAGT	ACTGGCCCGAATTGTAGATGGATG
1462	ATGAGCCGTTCAGAAAGCCAAAGA	TCTTTGGCTTTCTGAACGGCTCAT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1463	ACACTGGAATTGCTAGACCCCGCG	CGCGGGGTCTAGCAATTCCAGTGT
1464	CTGAGCTGCGTGGGACAACTCCGC	GCGGAGTTGTCCCACGCAGCTCAG
1465	CAGCTACTAGGGCGCGATGTACCC	GGGTACATCGCGCCCTAGTAGCTG
1466	ATAATGATGGGACGAGAAGGCCCC	GGGGCCTTCTCGTCCCATCATTAT
1467	CGACCGAGTGTTACGACATGGTGC	GCACCATGTCGTAACACTCGGTCG
1468	TGCAGTACCCGCCGCTCCACTAGT	ACTAGTGGAGCGGCGGGTACTGCA
1469	ATGCTAGCGCGCCTGTCAACGTAC	GTACGTTGACAGGCGCGCTAGCAT
1470	AGACTCACTGCCGGCTGATCAAAT	ATTTGATCAGCCGGCAGTGAGTCT
1471	GCCTGGTGCGAAGATAGGGATTCC	GGAATCCCTATCTTCGCACCAGGC
1472	GGAAAGTTGGCGGATCCGAGCACT	AGTGCTCGGATCCGCCAACTTTCC
1473	GGCAGTGAGCAATGTGTGACGAGG	CCTCGTCACACATTGCTCACTGCC
1474	TGAGGTCCTCCCGGCGGACTACGA	TCGTAGTCCGCCGGGAGGACCTCA
1475	CTCGCCTTAGATCGTGGTTCCGCA	TGCGGAACCACGATCTAAGGCGAG
1476	GTCGAGGAATATCATCGCAGCCAG	CTGGCTGCGATGATATTCCTCGAC
1477	GCGAATGCAACGAGACAAGAAGGA	TCCTTCTTGTCTCGTTGCATTCGC
1478	TTCGCCACCAAGTCGGCATTTGTT	AACAAATGCCGACTTGGTGGCGAA
1479	CGGTGGCTGACACTTGCCGGATTC	GAATCCGGCAAGTGTCAGCCACCG
1480	CAAGGAGCAATCAGATGGTCGGAG	CTCCGACCATCTGATTGCTCCTTG
1481	GTGACCCGGTCCGTTCTAGCTGTG	CACAGCTAGAACGGACCGGGTCAC
1482	CTCTCGCCCACATAACTGCACAAA	TTTGTGCAGTTATGTGGGCGAGAG
1483	AAACCTGCCTAAGCAAGCACTGGA	TCCAGTGCTTGCTTAGGCAGGTTT
1484	TTCCATATTGTACCCCGCGCATGC	GCATGCGCGGGGTACAATATGGAA
1485	TGCTTGCGATATCACGATACTGCG	CGCAGTATCGTGATATCGCAAGCA
1486	TTAGTGTTCGAGCCTTGAGCCGGC	GCCGGCTCAAGGCTCGAACACTAA
1487	CTTGTTGCGCGAGTCCGTCTGGGA	TCCCAGACGGACTCGCGCAACAAG
1488	GTCAGCTGCCTGCTGGTGCTCTTC	GAAGAGCACCAGCAGGCAGCTGAC
1489	CATCCCTCGAGGTGTAGGCAACAC	GTGTTGCCTACACCTCGAGGGATG
1490	CAGATGCACTCCGACGGGATTCAG	CTGAATCCCGTCGGAGTGCATCTG
1491	CTGAGCCTCGCGAAGCTGTGGCAT	ATGCCACAGCTTCGCGAGGCTCAG
1492	GCTATGCCACGCCGCAGATAGAGC	GCTCTATCTGCGGCGTGGCATAGC
1493	AACACCAACCATACCGTCCGTTCA	TGAACGGACGGTATGGTTGGTGTT
1494	GCCCAGAGCTAAAGCATGTCTGGG	CCCAGACATGCTTTAGCTCTGGGC
1495	AATGCTGCAATGCTAGCGTCGCTA	TAGCGACGCTAGCATTGCAGCATT
1496	TCCGGACGCAGTATCCAATCCGGA	TCCGGATTGGATACTGCGTCCGGA
1497	TAAGACCATGTGGCACCAAGGTGC	GCACCTTGGTGCCACATGGTCTTA
1498	ACAGCCACACACACGCGCCCACTA	TAGTGGGCGCGTGTGTGTGGCTGT
1499	TAGAACCGAGCACGGCGCCTTGTA	TACAAGGCGCCGTGCTCGGTTCTA
1500	TTCGAGTAAGCTGGCAGGACCACT	AGTGGTCCTGCCAGCTTACTCGAA
1501	CTTTCGCAGGTTCGCAGACAATCC	GGATTGTCTGCGAACCTGCGAAAG
1502	TACGTCCTGTGCTGTTGACACCGG	CCGGTGTCAACAGCACAGGACGTA
1503	GTTCGGGTCAATGTTTCGGGGAGA	TCTCCCCGAAACATTGACCCGAAC
1504	CCCTGTTGTGAAGGGGTTTTGTGA	TCACAAAACCCCTTCACAACAGGG
1505	GGCAGATTGGTGAACCCCAGATAA	TTATCTGGGGTTCACCAATCTGCC
1506	CCCTCGGTGTGTTCAAGCCAAATC	GATTTGGCTTGAACACACCGAGGG
1507	CCCGCGAACATTTGAACAGCTTAA	TTAAGCTGTTCAAATGTTCGCGGG
1508	CCGTGTCAGTTGCTCCCTGGCACG	CGTGCCAGGGAGCAACTGACACGG
1509	TCCGTCTCAGCCGCCTCCCTATCC	GGATAGGGAGGCGGCTGAGACGGA
1510	ATAGCTGGGTCACCACAGGCGGTC	GACCGCCTGTGGTGACCCAGCTAT
1511	ATAGGCAAGCGGTGTAGCACAGCG	CGCTGTGCTACACCGCTTGCCTAT
1512	TTAGAAGCCGGTCTGGATTTGCGT	ACGCAAATCCAGACCGGCTTCTAA
1513	TGCCGACCTTTACCAGGATCCTCG	CGAGGATCCTGGTAAAGGTCGGCA
1514	GCCCACACTATAACCAAGCTGGCA	TGCCAGCTTGGTTATAGTGTGGGC
1515	TTGCGCCACTAGTACGGATCTCAA	TTGAGATCCGTACTAGTGGCGCAA
1516	CTTGCAGTTTATGCTGACCCGTCC	GGACGGGTCAGCATAAACTGCAAG
1517	TGCCTCCAAATTACTTACCGCCGT	ACGGCGGTAAGTAATTTGGAGGCA
1518	CCCGTATGCGGAAGCTATGGGCTA	TAGCCCATAGCTTCCGCATACGGG
1519	TCGTTCAACCCCACACTTCAGTTG	CAACTGAAGTGTGGGGTTGAACGA
1520	CAATGTGGGGGACATTTCAAGGTT	AACCTTGAAATGTCCCCCACATTG
1521	TAGCGTCGCACAAATGGCTGACCG	CGGTCAGCCATTTGTGCGACGCTA
1522	GGTGGCTTCGTGACAATATCGGCC	GGCCGATATTGTCACGAAGCCACC
1523	CAGCGGCGTCCGAAATTGGCTCTC	GAGAGCCAATTTCGGACGCCGCTG
1524	GGCTTGCTCTCGTTTTTGATTGCA	TGCAATCAAAAACGAGAGCAAGCC
1525	ATGCGAGGAGGACACGACCGTTCC	GGAACGGTCGTGTCCTCCTCGCAT
1526	CCTGTTCACTACGACCCACGGGAA	TTCCCGTGGGTCGTAGTGAACAGG
1527	GTGCCACGGAGTGCGACTGTTGCT	AGCAACAGTCGCACTCCGTGGCAC
1528	ACACATCCAAGTCTGACGATGGCC	GGCCATCGTCAGACTTGGATGTGT
1529	CAGCCCGAAAGGAAAGCCTCCGTG	CACGGAGGCTTTCCTTTCGGGCTG
1530	AACTGAATGTAGGTGGGCCCCTGT	ACAGGGGCCCACCTACATTCAGTT
1531	ATTTTCGACGATAAGCTGGCCGGT	ACCGGCCAGCTTATCGTCGAAAAT
1532	TGAGGGAGAACCCGAAATCTGCTT	AAGCAGATTTCGGGTTCTCCCTCA
1533	GGCGACTACATCCCCAATTGCTTG	CAAGCAATTGGGGATGTAGTCGCC
1534	GCAGACGCGGCCTTCCATACTTTT	AAAAGTATGGAAGGCCGCGTCTGC
1535	ACAACCACATGACGTGTAGCTGCA	TGCAGCTACACGTCATGTGGTTGT
1536	CTGCTGGGCGCGCAAAGCTTGTTG	CAACAAGCTTTGCGCGCCCAGCAG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1537	AAGCCTTCTTTGGCTTGCTCCGCT	AGCGGAGCAAGCCAAAGAAGGCTT
1538	TACCTGCTGCCTGGAGCAAGGCAT	ATGCCTTGCTCCAGGCAGCAGGTA
1539	GACGCCGCAGCCATGAGTGAGTGT	ACACTCACTCATGGCTGCGGCGTC
1540	AGTTGGCCGCTTATTTTGCTCACC	GGTGAGCAAAATAAGCGGCCAACT
1541	CCAGGCGCCTTCGACAGATCCTCA	TGAGGATCTGTCGAAGGCGCCTGG
1542	GTGTCCCCTCCAGCTAGCCAGTTT	AAACTGGCTAGCTGGAGGGGACAC
1543	GACAACAAGCCAAGGTGACACGTC	GACGTGTCACCTTGGCTTGTTGTC
1544	CTACACCGCTCGTGACTCGGCAAA	TTTGCCGAGTCACGAGCGGTGTAG
1545	TGGTGCCATCAAAGCACGTTGTAC	GTACAACGTGCTTTGATGGCACCA
1546	ACAATGCGTGTTGCGAAACGCATA	TATGCGTTTCGCAACACGCATTGT
1547	TTGTCCAGCCATTGTATTTTGCGC	GCGCAAAATACAATGGCTGGACAA
1548	ACGAGAGATAGCGGACTCCTCCGA	TCGGAGGAGTCCGCTATCTCTCGT
1549	AGCTTTGTCGTCAGGCGAGCTCTT	AAGAGCTCGCCTGACGACAAAGCT
1550	GACAGTCGGCGTGCAGTTTGTTGT	ACAACAAACTGCACGCCGACTGTC
1551	AGCTAGCGACGGCCAACTCACGTA	TACGTGAGTTGGCCGTCGCTAGCT
1552	CTCCTGTTCGGGGCCGTTACTGGT	ACCAGTAACGGCCCCGAACAGGAG
1553	ACTGACCGACGCAGTGCCACATAG	CTATGTGGCACTGCGTCGGTCAGT
1554	AGGTAGGGTCTGGTTTGACTCGCA	TGCGAGTCAAACCAGACCCTACCT
1555	CCTCCATTTTAGCGCGTTGCCAAT	ATTGGCAACGCGCTAAAATGGAGG
1556	TTCTTAGGATCCGCGCACTCTTGG	CCAAGAGTGCGCGGATCCTAAGAA
1557	GTCGAAGGTGTCTACCGTGCGCAG	CTGCGCACGGTAGACACCTTCGAC
1558	GTCACTCGGCGGCCCAATCACTCG	CGAGTGATTGGGCCGCCGAGTGAC
1559	TCTCGGTCACCCGTCTTGACCCTT	AAGGGTCAAGACGGGTGACCGAGA
1560	GCCCTCGACGAACTCATCCTGAAC	GTTCAGGATGAGTTCGTCGAGGGC
1561	TCCGGCGTACTCTGACACGGCGAT	ATCGCCGTGTCAGAGTACGCCGGA
1562	AGCCAAATGCTTTCGTGGTTCGGA	TCCGAACCACGAAAGCATTTGGCT
1563	ACTCCACGCCGCATGTTGCTGTGA	TCACAGCAACATGCGGCGTGGAGT
1564	GCTTCGAGTCGGTGGCATCTGTAT	ATACAGATGCCACCGACTCGAAGC
1565	GGTCTTGGGCCATCGACTTGCTGC	GCAGCAAGTCGATGGCCCAAGACC
1566	GGTATCGGACTGCACTAAGGGCAA	TTGCCCTTAGTGCAGTCCGATACC
1567	AGCCCATGCGTTCCGGATGATTTG	CAAATCATCCGGAACGCATGGGCT
1568	GCCAGGGTTAAAAGTGATGGGCTC	GAGCCCATCACTTTTAACCCTGGC
1569	GACGACGTGCTGGCTACGAAGGGG	CCCCTTCGTAGCCAGCACGTCGTC
1570	TCCTATTGACCGTGCATCGTGATC	GATCACGATGCACGGTCAATAGGA
1571	ACCCGCCTCGACTCCACAACTAAA	TTTAGTTGTGGAGTCGAGGCGGGT
1572	GATGTGGATCACGACCTGCCAGTA	TACTGGCAGGTCGTGATCCACATC
1573	GTGCCATTGCCACCCATAATGCGT	ACGCATTATGGGTGGCAATGGCAC
1574	TTAGCCTGTGCACCCAGTCAGGAG	CTCCTGACTGGGTGCACAGGCTAA
1575	TCCGATGGGAGAGGCTGATCTCAC	GTGAGATCAGCCTCTCCCATCGGA
1576	CACTACTGAAGTGGCCTGGCGCTG	CAGCGCCAGGCCACTTCAGTAGTG
1577	TGCGGCCATAGCGATGTGATAGAT	ATCTATCACATCGCTATGGCCGCA
1578	GATTGCGCTTAACGGAGATGCACG	CGTGCATCTCCGTTAAGCGCAATC
1579	TCACGTTTGACAACGCCAAGCATT	AATGCTTGGCGTTGTCAAACGTGA
1580	GCATTGTTTGCTAAAGGCGGCATT	AATGCCGCCTTTAGCAAACAATGC
1581	AGTCGCTCTACGCGTGCAACGCTG	CAGCGTTGCACGCGTAGAGCGACT
1582	TAGCTCCATGGAGGTCCGAAAGGG	CCCTTTCGGACCTCCATGGAGCTA
1583	GACCGGTTGGACCTCACTGGCTTC	GAAGCCAGTGAGGTCCAACCGGTC
1584	AAGCCGGACAGTCAATGTGCGTAT	ATACGCACATTGACTGTCCGGCTT
1585	TGCCTCGCTGAGTTCTTCACCGTG	CACGGTGAAGAACTCAGCGAGGCA
1586	TCGTAGACCTTGCTTTTGGGCTCA	TGAGCCCAAAAGCAAGGTCTACGA
1587	ACCGCTATGCGCCCTACAAAGCAT	ATGCTTTGTAGGGCGCATAGCGGT
1588	TAGCGTCACCGTAGCTTGGGGCAG	CTGCCCCAAGCTACGGTGACGCTA
1589	CTCTCAGCAACTGATGGCACCGGA	TCCGGTGCCATCAGTTGCTGAGAG
1590	AAAGGAAATGTGGTGCTGGTCGGC	GCCGACCAGCACCACATTTCCTTT
1591	CCGGCTTAGATGGAGAACAAGTGC	GCACTTGTTCTCCATCTAAGCCGG
1592	AAGTAAATCGCCTCGCCCAAACCG	CGGTTTGGGCGAGGCGATTTACTT
1593	TGGGCTGTTCAGCCTACCGGACGT	ACGTCCGGTAGGCTGAACAGCCCA
1594	GTTTCGGTTCAGCCATGGGCCTAC	GTAGGCCCATGGCTGAACCGAAAC
1595	GGCCAACATTTCTAGGGGAGTGCC	GGCACTCCCCTAGAAATGTTGGCC
1596	TTCTTCGTTGGGATTGTCCTCACC	GGTGAGGACAATCCCAACGAAGAA
1597	TGCACATTGGGGTACGGATCTGAC	GTCAGATCCGTACCCCAATGTGCA
1598	GGCAGTTAGACGGCAAACTGCAGG	CGTGCAGTTTGCCGTCTAACTGCC
1599	CGCGTCAGGCTATGAATGGCTCTT	AAGAGCCATTCATAGCCTGACGCG
1600	GCTGAATGCAAACCTCGGAGCCAT	ATGGCTCCGAGGTTTGCATTCAGC
1601	CGCTCTGGCGGATTCATTGTTTTC	GAAAACAATGAATCCGCCAGAGCG
1602	TTTTCAATCAACCCTCCGGACGTA	TACGTCCGGAGGGTTGATTGAAAA
1603	GTGGTGGAGTCTGAAGCACGACAG	CTGTCGTGCTTCAGACTCCACCAC
1604	AAACAGGTCCGGATGATGTCTGGA	TCCAGACATCATCCGGACCTGTTT
1605	GTACCGCGTGTACGCCACCGTTAG	CTAACGGTGGCGTACACGCGGTAC
1606	TCCAACCTACATTTGCGGAAGGAA	TTCCTTCCGCAAATGTAGGTTGGA
1607	GACGTACCGTGGTCCCGTGAGTTG	CAACTCACGGGACGACGGTACGTC
1608	GGCAATCCTACAACCGACGCTGAT	ATCAGCGTCGGTTGTAGGATTGCC
1609	GGCGGCTGCAGGGTCTACATCGAG	CTCGATGTAGACCCTGCAGCCGCC
1610	ATACTACGCTGCAGCTGCGCGGGC	GCCCGCGCAGCTGCAGCGTAGTAT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1611	GGATCGCAATCCCTCCGATGACGA	TCGTCATCGGAGGGATTGCGATCC
1612	TGGCCTTGCACGGGAGCCGAATCT	AGATTCGGCTCCCGTGCAAGGCCA
1613	AGGTGCCGACGAAACGACGAATAT	ATATTCGTCGTTTCGTCGGCACCT
1614	GCTGTTTCACCGTCGTCGTTGTTG	CAACAACGACGACGGTGAAACAGC
1615	CGGTCCCAATGTTACAACCCAGAC	GTCTGGGTTGTPACATTGGGACCG
1616	GCAATTCCAGCCACTTTTGACCAA	TTGGTCAAAAGTGGCTGGAATTGC
1617	ACGGGCGAAAGCTCGGTACGGATA	TATCCGTACCGAGCTTTCGCCCGT
1618	CGACCCGACTTTTGCTTTCGAGTG	CACTCGAAAGCAAAAGTCGGGTCG
1619	AATTCAGTGTTTGCGTCATGGTCG	CGACCATGACGCAAACACTGAATT
1620	CCTGTATGAGGTTCTGGGTCGGCT	AGCCGACCCAGAACCTCATACAGG
1621	TGGCATACTTGGTGCAAACGCCGT	ACGGCGTTTGCACCAAGTATGCCA
1622	TCGCCAGTACAGAAACATGCGGGC	GCCCGCATGTTTCTGTACTGGCGA
1623	CCCGCTGTTGCTCTCATCGTGGAG	CTCCACGATGAGAGCAACAGCGGG
1624	GCCACAATCTGACCCTGGGAATCA	TGATTCCCAGGGTCAGATTGTGGC
1625	GCTCAGTCTCGGAAGTTTCGGCTA	TAGCCGAAACTTCCGAGACTGAGC
1626	CTTCACGGGCCAACGACGGTCGAG	CTCGACCGTCGTTGGCCCGTGAAG
1627	CGACAGTTCCGTCCGTCTTGAGGA	TCCTCAAGACGGACGGAACTGTCG
1628	ACGGAGACGCAGTCGAAACGTCCC	GGGACGTTTCGACTGCGTCTCCGT
1629	CATGCATCCGATTAAGGGGATCAC	GTGATCCCCTTAATCGGATGCATG
1630	ATTGCGGGAGTCCCTAGCTTTCTG	CAGAAAGCTAGGGACTCCCGCAAT
1631	GTGTGGAAGATGCAATTGGAACGG	CCGTTCCAATTGCATCTTCCACAC
1632	ATACAACGGTAGGTGACAGGGGCG	CGCCCCTGTCACCTACCGTTGTAT
1633	GCCGTGGGAGTAAGGGTACAAAGG	CCTTTGTACCCTTACTCCCACGGC
1634	GCACGTAGGTGGGCTACTACTCGG	CCGAGTAGTAGCCGACCTACGTGC
1635	ACTGTGATCTCTTGGGCAAAGGGC	GCCCTTTGCCCAAGAGATCACAGT
1636	CATGCCTGAACAATCTCGCATCCC	GGGATGCGAGATTGTTCAGGCATG
1637	GAGCCTGGCTCCACAGCTGTGCTC	GAGCACAGCTGTGGAGCCAGGCTC
1638	CTTTCGATACCATCGTTGGCGATC	GATCGCCAACGATGGTATCGAAAG
1639	CCCGGAGGTGAGGCATTGAATATG	CATATTCAATGCCTCACCTCCGGG
1640	CTCATTCAGCTAAAAGCGGCTGGA	TCCAGCCGCTTTTAGCTGAATGAG
1641	GAAATGCCCTGGGGACTTTTTGCC	GGCAAAAAGTCCCCAGGGCATTTC
1642	TTTGCCTTCACAACAGACGCAGCA	TGCTGCGTCTGTTGTGAAGGCAAA
1643	AAATCCCAAGACGTCGGGGCGTAT	ATACGCCCCGACGTCTTGGGATTT
1644	CAACGGGCGGTAGCTAAACCGTAA	TTACGGTTTAGCTACCGCCCGTTG
1645	GGCCAACGACAATGCGAAACCTTC	GAAGGTTTCGCATTGTCGTTGGCC
1646	GACATCACGCAAAATCTCAGCGCA	TGCGCTGAGATTTTGCGTGATGTC
1647	ACGTTCCGTCCACAACCGTATGTT	AACATACGGTTGTGGACGGAACGT
1648	GCTCATAGGTCTTCCGTAGCCCGT	ACGGGCTACGGAAGACCTATGAGC
1649	GAAACGAGTCTCTCGCGCCCTAGA	TCTAGGGCGCGAGAGACTCGTTTC
1650	CGGGACAGAAGCAAGTTACATCGG	CCGATGTAACTTGCTTCTGTCCCG
1651	TGACCGCTCGATACCAGGAGGGTG	CACCCTCCTGGTATCGAGCGGTCA
1652	CTGGCAATAAAGACCTTCCGACCA	TGGTCGGAAGGTCTTTATTGCCAG
1653	TGCGCGACGTCATGTTGGTGATTA	TAATCACCAACATGACGTCGCGCA
1654	GTTGGTTGTGGGAACACACCCGCT	AGCGGGTGTGTTCCCACAACCAAC
1655	TGTGGGTTCGGAAACACAGGAAGT	ACTTCCTGTGTTTCCGAACCCACA
1656	GGAAAAAACGGCAATTAGCCGAGT	ACTCGGCTAATTGCCGTTTTTTCC
1657	TGGTGGGGAGTGCCCTCTATTGGG	CCCAATAGAGGGCACTCCGCACCA
1658	AACCAACAGGCTGCAGCCCAGACT	AGTCTGGGCTGCAGCCTGTTGGTT
1659	AAACAGATCCATCTGCACGCCAGG	CCTGGCGTGCAGATGGATCTGTTT
1660	GGAATACCGCGGCGATTATGGCTT	AAGCCATAATCGCCGCGGTATTCC
1661	TACTGTTCGCGGCAAACCGTCACT	AGTGACGGTTTGCCGCGAACAGTA
1662	GATCTCTCGTGGAGCACGTTTTCC	GGAAAACGTGCTCCACGAGAGATC
1663	GGCATAGCAAACCTTGACCTCCAA	TTGGAGGTCAAGGTTTGCTATGCC
1664	ATCTGGGATTCGCGAGCCAATATC	GATATTGGCTCGCGAATCCCAGAT
1665	CGATCAGGATATCATTTACGCCCG	CGGGCGTAAATGATATCCTGATCG
1666	ACGGTACCGAAACGGTCTCAGCGT	ACGCTGAGACCGTTTCGGTACCGT
1667	CTCCCATACCTGCGTTCTTACCGA	TCGGTAAGAACGCAGGTATGGGAG
1668	GCACGAGAACCTAATTGTCGCACA	TGTGCGACAATTAGGTTCTCGTGC
1669	GCCACACGATCAAGACAGCGCATG	CATGCGCTGTCTTGATCGTGTGGC
1670	CCCGTTAACTCACGAGCGGTCAAT	ATTGACCGCTCGTGAGTTAACGGG
1671	AGAGAAGGTCATTGCCTGTCGGTG	CACCGACAGGCAATGACCTTCTCT
1672	CGGGCCCTCTTAAAGTAGAGCAGG	CCTGCTCTACTTTAAGAGGGCCCG
1673	ACATCGCGTCCGAGGGAGTTAGCG	CGCTAACTCCCTCGGACGCGATGT
1674	AATGCCTAATCGAGCCAGCGGATC	GATCCGCTGGCTCGATTAGGCATT
1675	CTCGATCTTTTTAAACCGGCGCTT	AAGCGCCGGTTTAAAAAGATCGAG
1676	CGTTCCTGGAAGGCAGGGTCTCAC	GTGAGACCCTGCCTTCCAGGAACG
1677	CCTGTGCTTACTATCGGCGATCCA	TGGATCGCCGATAGTAAGCACAGG
1678	GTTAGTCGCCCTATTGGCCTGGTT	AACCAGGCCAATAGGGCGACTAAC
1679	CCGGTGAGATGACTGTAAATGCCA	TGGCATTTACAGTCATCTCACCGG
1680	CGTGGTTTAAAACATCGCGCTTCG	CGAAGCGCGATGTTTTAAACCACG
1681	TAAGACGCAGAAGATGGGGTCCAC	GTGGACCCCATCTTCTGCGTCTTA
1682	CACCACAGCTTCTTTGTTCGACCC	GGGTCGAACAAAGAAGCTGTGGTG
1683	TCGGGTCCGTACCACCACTTTTGC	GCAAAAGTGGTGGTACGGACCCGA
1684	CCAAGCCCCGAGTACCGAAGATTT	AAATCTTCGGTACTCGGGGCTTGG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1685	TCCGTGATATGGTCGTGGCGCGGT	ACCGCGCCACGACCATATCACGGA
1686	TGTCTGTGTCATGGCACCTCGCAT	ATGCGAGGTGCCATGACACAGACA
1687	AGGACTGCACTGTGCACGTCTGAT	ATCAGACGTGCACAGTGCAGTCCT
1688	CCATCCTCATGTACAGCGCCGCTG	CAGCGGCGCTGTACATGAGGATGG
1689	GTACCCGCGCCTTCCTCGACACAG	CTGTGTCGAGGAAGGCGCGGGTAC
1690	ACGGGTCCTGGTCGACTAAGGCTT	AAGCCTTAGTCGACCAGGACCCGT
1691	CGTATCGAAGGCGTGTACAACCGG	CCGGTTGTACACGCCTTCGATACG
1692	TGCCCGCCCTTTATGCAACGCTCA	TGAGCGTTGCATAAAGGGCGGGCA
1693	AAACTTACGAGACGGCGGCTGCCA	TGGCAGCCGCCGTCTCGTAAGTTT
1694	AAGTCTGACAAACGGAACGGGTGT	ACACCCGTTCCGTTTGTCAGACTT
1695	TAAGCGCAGACCAAAGTATGCGGC	GCCGCATACTTTGGTCTGCGCTTA
1696	GCAGTTTTTCAGATCCTCCGCAAA	TTTGCGGAGGATCTGAAAAACTGC
1697	TCGGAAGCATTTACGCGATCTCAG	CTGAGATCGCGTAAATGCTTCCGA
1698	CACAGAAACGGTTGAACGAACGCC	GGCGTTCGTTCAACCGTTTCTGTG
1699	GCATGCTCAGATGGTCGTGCTCAC	GTGAGCACGACCATCTGAGCATGC
1700	AAGGATTCTCGCTTCCGGCATGAT	ATCATGCCGGAAGCGAGAATCCTT
1701	GGTGGGGTAGCGCTGGTATGAAAA	TTTTCATACCAGCGCTACCCCACC
1702	ATTATTACGGGACCGAACCAACGG	CCGTTGGTTCGGTCCCGTAATAAT
1703	GCGCGAGTGTCATGATGTTCACGT	ACGTGAACATCATGACACTCGCGC
1704	GACATTCGTGACTTGGTCGTCCGC	GCGGACGACCAAGTCACGAATGTC
1705	TCATTAGTGCAGGCACCGATCAAG	CTTGATCGGTGCCTGCACTAATGA
1706	GAGTTGTGCGGAGTCATCGGAGTC	GACTCCGATGACTCCGCACAACTC
1707	GCCTTTACAGATTTGGCGGGCTAT	ATAGCCCGCCAAATCTGTAAAGGC
1708	ATGGCGTTTGCGAAGTCGATACAG	CTGTATCGACTTCGCAAACGCCAT
1709	TGCATCGGCCTCAATCAGAGAACT	AGTTCTCTGATTGAGGCCGATGCA
1710	ACAATCATGGCAATCTGGCAAATG	CATTTGCCAGATTGCCATGATTGT
1711	GACGTGGAAGAGTGCAGATCAGCA	TGCTGATCTGCACTCTTCCACGTC
1712	AGGGCAGGGGACGGACAGTAAGTC	GACTTACTGTCCGTCCCCTGCCCT
1713	GCATAGGGCGAATCTAGTACGGGC	GCCCGTACTAGATTCGCCCTATGC
1714	TCCGGCGCATCCTCATTAGCAACT	AGTTGCTAATGAGGATGCGCCGGA
1715	TGGCCGCTTCCACTAATATTGGAC	GTCCAATATTAGTGGAAGCGGCCA
1716	CCGGCGGACGGCTCTTGTCAATGA	TCATTGACAAGAGCCGTCCGCCGG
1717	CGAGCAACCCAAAAGGAAGCAGTA	TACTGCTTCCTTTTGGGTTGCTCG
1718	GCGTATGATTCGGCAATCCGCCAG	CTGGCGGATTGCCGAATCATACGC
1719	AGTACCGCTACAACGCTGGTTCGC	GCGAACCAGCGTTGTAGCGGTACT
1720	GGGCAGGCCAGGTCCACCTGAGAA	TTCTCAGGTGGACCTGGCCTGCCC
1721	CCACTTCTGTGACCGAACCGTGCT	AGCACGGTTCGGTCACAGAAGTGG
1722	CCTGGTACCAGGCAGCAGTTGATT	AATCAACTGCTGCCTGGTACCAGG
1723	TTAGGGTACCGTCGAGAGACGCCA	TGGCGTCTCTCGACGGTACCCTAA
1724	GGTTGCTTGTGCGCGTGAGGTAGT	ACTACCTCACGCGCACAAGCAACC
1725	TGCTTCGACCGATGAAACTCGAAG	CTTCGAGTTTCATCGGTCGAAGCA
1726	TGCCACCCATACTATGCCCAGTGG	CCACTGGGCATAGTATGGGTGGCA
1727	TGTGCGGCAACGCGTGAAGACGTT	AACGTCTTCACGCGTTGCCGCACA
1728	TGAGAGAAGCTGGCCTCGGATCAG	CTGATCCGAGGCCAGCTTCTCTCA
1729	TATTGCGAATTCGAGTACGTGCCC	GGGCACGTACTCGAATTCGCAATA
1730	CGAGAGGGGTTCCCCAGTGATCGA	TCGATCACTGGGGAACCCCTCTCG
1731	TGCCTGGGGTGTCGTTCTAATTCT	AGAATTAGAACGACACCGCAGGCA
1732	GTGCGTCATTGTGGGTCATCCCAA	TTGGGATGACCCACAATGACGCAC
1733	AGGGCTCCCAGCATACCAACGTTG	CAACGTTGGTATGCTGGGAGCCCT
1734	AACTAGCCGCACCTTTGTGCAGAG	CTCTGCACAAAGGTGCGGCTAGTT
1735	TTAGCCCAGCCCTTCAATGGGAAC	GTTCCCATTGAAGGGCTGGGCTAA
1736	CGGCCTCGGTTGTACGGGTAGTCT	AGACTACCCGTACAACCGAGGCCG
1737	TCTTTGAGGCGCGGACCCGCATAT	ATATGCGGGTCCGCGCCTCAAAGA
1738	GATGGTTCGCCCTTGTGTCGCAGC	GCTGCGACACAAGGGCGAACCATC
1739	GAGATTCAATACAGGCCGCGGGTC	GACCCGCGGCCTGTATTGAATCTC
1740	AGGGCGAAGGAAGGTTCCGTTTTT	AAAAACGGAACCTTCCTTCGCCCT
1741	CTCGACCCCTGCCACTACTGGTTC	GAACCAGTAGTGGCAGGGGTCGAG
1742	TGTTCCGCGGTCTACGCATTACTG	CAGTAATGCGTAGACCGCGGAACA
1743	GAGACGACGTCCTACACCCGCTAA	TTAGCGGGTGTAGGACGTCGTCTC
1744	AGATTGCGACAGCGACACGTGATT	AATCACGTGTCGCTGTCGCAATCT
1745	GATACCGTTGGGCATTTCTCGGTA	TACCGAGAAATGCCCAACGGTATC
1746	GATTGGGAGGCATTCAGCGACGGA	TCCGTCGCTGAATGCCTCCCAATC
1747	AGGAGGAAACGAGGGCGTAGGTTC	GAACCTACGCCCTCGTTTCCTCCT
1748	GCCAAACAACGTCTGACGCCTAGC	GCTAGGCGTCAGACGTTGTTTGGC
1749	TTTAATGCGGAAAGGATGCACGCG	CGCGTGCATCCTTTCCGCATTAAA
1750	TTATCGGCCGTTAAAATGGGATGG	CCATCCCATTTTAACGGCCGATAA
1751	CCTTGGATTCGTTCATCGCTAGCA	TGCTAGCGATGAACGAATCCAAGG
1752	AAGTGAACGTGCAGTGGTCTTCGA	TCGAAGACCACTGCACGTTCACTT
1753	TCCTTACCCCTCGTTCAAACGCCT	AGGCGTTTGAACGAGGGGTAAGGA
1754	ATTCCTGAACCATGCATGGCCTGT	ACAGGCCATGCATGGTTCAGGAAT
1755	AGCGAGACGCTCGATCACGAACTA	TAGTTCGTGATCGAGCGTCTCGCT
1756	GCTGGTCTGGCTCGCTGTTTAGAA	TTCTAAACAGCGAGCCAGACCAGC
1757	CGTGCGCGGCATAAAGATAGGTCT	AGACCTATCTTTATGCCGCGCACG
1758	TCTGGCACTCACATCGGACAGTCT	AGACTGTCCGATGTGAGTGCCAGA

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1759	ACCATTGGAGGACCACAGAGCTCC	GGAGCTCTGTGGTCCTCCAATGGT
1760	TCCAGGGTCGGAGTACATGGCGGG	CCCGCCATGTACTCCGACCCTGGA
1761	ATATGCCGTCGGATCGTACACGCA	TGCGTGTACGATCCGACGGCATAT
1762	TGCTGGCGTCAACACTTCCCGATT	AATCGGGAAGTGTTGACGCCAGCA
1763	CAGGGCGGTGCGGTGAACTAGCCA	TGGCTAGTTCACCGCACCGCCCTG
1764	CATGGACTGCCGTACATCAGCTGG	CCAGCTGATGTACGGCAGTCCATG
1765	CCGGCCATACGCTGGCAAGATTAC	GTAATCTTGCCAGCGTATGGCCGG
1766	AGCGGACACCTGTACTCTCCTCCA	TGGAGGAGAGTACAGGTGTCCGCT
1767	GGAGCCACACCAGTCGAAGATGGT	ACCATCTTCGACTGGTGTGGCTCC
1768	CGCCACCGGAAATTGAAAAGACTG	CAGTCTTTTCAATTTCCGGTGGCG
1769	TGAAAGGGATGTTGCTTCTTGACG	CGTCAAGAAGCAACATCCGTTTCA
1770	TTGAAGCGGTGAAGAGCCTGTCCT	AGGACAGGCTCTTCACCGCTTCAA
1771	CGAACCAAGCTGCATTGTCAGTGG	CCACTGACAATGCAGCTTGGTTCG
1772	GAGTCTGCGCTTGCAATCTTTGCG	CGCAAAGATTGCAAGCGCAGACTC
1773	GCTGGGTATAGTTGCCTGGCAATG	CATTGCCAGGCAACTATACCCAGC
1774	GCAGGCGTTCCATATTCGCAACCC	GGGTTGCGAATATGGAACGCCTGC
1775	GCGCCAACTAATACCTCCACCGCG	CGCGGTGGAGGTATTAGTTGGCGC
1776	TGGCGTTCAGTGCAACGCTGGTTA	TAACCAGCGTTGCACTGAACGCCA
1777	CAAAACTGACGGGTATGGGAGCGC	GCGCTCCCATACCCGTCAGTTTTG
1778	AGGTGTCGCTGGAACCCGACTTGT	ACAAGTCGGGTTCCAGCGACACCT
1779	CTTCCAAAAGCGCAATTGGCTTTG	CAAAGCCAATTGCGCTTTTGGAAG
1780	TCGGGCTTCTCGCAATTCTGTCAG	CTGACAGAATTGCGAGAAGCCCGA
1781	GCCAAAAGAATGCGCTGGGTAGGT	ACCTACCCAGCGCATTCTTTTGGC
1782	TGGTGCCCGCACCGAGAGACTGTA	TACAGTCTCTCGGTGCGGGCACCA
1783	CGAGGCCGTAGTGGGGACTGCTCT	AGAGCAGTCCCCACTACGGCCTCG
1784	CGATCTGCGCATAGAGGGGACTTT	AAAGTCCCCTCTATGCGCAGATCG
1785	TGTGCAATCGGCCTTCTCAGAGCC	GGCTCTGAGAAGGCCGATTGCACA
1786	GATCACCTGGACCGCTACCGTTTT	AAAACGGTAGCGGTCCAGGTGATC
1787	ATGGGGAGTTAAGGACCCTGCACC	GGTGCAGGGTCCTTAACTCCCCAT
1788	CATTGTGGACAGCCAATGGTGGCT	AGCCACCATTGGCTGTCCACAATG
1789	CCATCACCATGCCACGGTAAGATC	GATCTTACCGTGGCATGGTGATGG
1790	GCACCCGTGTCGTTGGTTAGCAAG	CTTGCTAACCAACGACACGGGTGC
1791	GGAGTGGGTTCCGCGAATTCACTG	CAGTGAATTCGCGGAACCCACTCC
1792	GGGGATTTCCTTTCGCAGGCTCGA	TCGAGCCTGCGAAAGGAAATCCCC
1793	CATTGATCATGTGCACTTGCACCA	TGGTGCAAGTGCACATGATCAATG
1794	AGCAGCGCTGCGCTTGTTTCGGAT	ATCCGAAACAAGCGCAGCGCTGCT
1795	CGAGTAACGCGGTTGCTTTGCGAA	TTCGCAAAGCAACCGCGTTACTCG
1796	TGGCCTGGAACATAGGTGGAACTC	GAGTTCCACCTATGTTCCAGGCCA
1797	CGCACACCAAGCGTTTATTGAGAA	TTCTCAATAAACGCTTGGTGTGCG
1798	TCACCTTCACAGTGGGCATACAGC	GCTGTATGCCCACTGTGAAGGTGA
1799	CAAATATCCCTGAGCCCTCGAGCT	AGCTCGAGGGCTCAGGGATATTTG
1800	GGGAGCTGGTGAGCAGATGTAACG	CGTTACATCTGCTCACCAGCTCCC
1801	AGGATTGCTTTTGCGTTATGCGGA	TCCGCATAACGCAAAAGCAATCCT
1802	ATCGTTTGGGCGCTACGCAATTGT	ACAATTGCGTAGCGCCCAAACGAT
1803	CCGATTTGTCCCAAATGGAACGTT	AACGTTGCATTTGGGACAAATCGG
1804	AAGGGTCAAGCTCATGGAGCGGAA	TTCCGCTCCATGAGCTTGACCCTT
1805	TCTGACGTCGTTCAAGGGCTCGCT	AGCGAGCCCTTGAACGACGTCAGA
1806	CGCACCACTCCGAGGTATTTGTCT	AGACAAATACCTCGGAGTGGTGCG
1807	AAGGGGTGAAAAAGGAGAAGCCGA	TCGGCTTCTCCTTTTTCACCCCTT
1808	AAACCACGCAAATGGCGATACCAT	ATGGTATCGCCATTTGCGTGGTTT
1809	CAGAAGGGATGACGCCTTAAGTCG	CGACTTAAGGCGTCATCCCTTCTG
1810	CATGACGAGAGCGGACCTGAAGTG	CAGTTCAGGTCCGCTCTCGTCATG
1811	CTGGACATGTTTGTTTCGCCACTG	CAGTGGCGAAACAAACATGTCCAG
1812	AAGACCGACTCTCGTCGTTTGCAC	GTGCAAACGACGAGAGTCGGTCTT
1813	GCGCGATTACATACCGTTTCCGTA	TACGGAAACGGTATGTAATCGCGC
1814	CACTGACCGGACCCAACCTAACAT	ATGTTAGGTTGGGTCCGGTCAGTG
1815	AGTGCAAGTCTAGACACGCCCGAG	CTCGGGCGTGTCTAGACTTGCACT
1816	GGTTGGTGCGAGATCCTGGACTGT	ACAGTCCAGGATCTCGCACCAACC
1817	GGTCGTCCCGAAACGTAAACGAGG	CCTCGTTTACGTTTCGGGACGACC
1818	GACTAGTACGATCACGGGGCGGGT	ACCCGCCCCGTGATCGTACTAGTC
1819	CCGACCTGACCCTGTGTACAGGTT	AACCTGTACAGAGGGTCAGGTCGG
1820	TGCTCACTGCCCACACTGTTATGG	CCATAACAGTGTGGGCAGTGAGCA
1821	CGAGGAAACACATTTCTTCGGGCC	GGCCCGAAGAAATGTGTTTCCTCG
1822	TGGCACCGGGTGGATTCTTGTCTA	TAGACAAGAATCCACCCGGTGCCA
1823	GAGGCACGGTGATAGTGGTTGTGC	GCACAACCACTATCACCGTGCCTC
1824	ATGCAGATGGATCTTTTTCGACGC	GCGTCGAAAAAGATCCATCTGCAT
1825	TGCGATAGCCAAAGAGTCGAGGAC	GTCCTCGACTCTTTGGCTATCGCA
1826	ATGGCGTGTCAGCGAACTGCCTGG	CCAGGCAGTTCGCTGACACGCCAT
1827	CAATGCAGCTCGGAAGTCAGGTCG	CGACCTGACTTCCGAGCTGCATTG
1828	AGGATCAGTGCACATGTCCCCTCA	TGAGGGGACATGTGCACTGATCCT
1829	CACATCTTGGCTGTCACCCGAGAA	TTCTCGGGTGACAGCCAAGATGTG
1830	CGCATTATCACCTCAATGCCAGTG	CACTGGCATTGAGGTGATAATGCG
1831	ACATCCGCAGACTCCCTATAGCCC	GGGCTATAGGGAGTCTGCGGATGT
1832	GTGAACCCGAACGAGGGGAGTCTC	GAGACTCCCCTCGTTCGGGTTCAC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1833	GCGTAGGGAATTTGCCTCACGACT	AGTCGTGAGGCAAATTCCCTACGC
1834	TTTACGCGTCGCTCGGTTGTAGTG	CACTACAACCGAGCGACGCGTAAA
1835	GAGAGGCGTCTAGGCGGTTCTAGC	GCTAGAACCGCCTAGACGCCTCTC
1836	GCATGCTGATAACGAATGCTTCCC	GGGAAGCATTCGTTATCAGCATGC
1837	CTGAAGCTCGTGTGCGATGAGGGA	TCCCTCATCGCACACGAGCTTCAG
1838	ACAACGGCATGAGGAGGCTTTTTC	GAAAAAGCCTCCTCATGCCGTTGT
1839	TTTGGAGACGCCAGTACGCGTGGT	ACCACGCGTACTGGCGTCTCCAAA
1840	GCTATCATTTGGTGTAAGCCCGCC	GGCGGGCTTACACCAAATGATAGC
1841	TCAACATCCAGGGCGGTGCTTGGT	ACCAAGCACCGCCCTGGATGTTGA
1842	TTCGATGTAATCCCCAAAGATGCC	GGCATCTTTGGGGATTACATCGAA
1843	GGACCTTCGGCAGGTTATCGCCGT	ACGGCGATAACCTGCCGAAGGTCC
1844	AGTAAGAAGAGGCAGGCCCCACCT	AGGTGGGGCCTGCCTCTTCTTACT
1845	AACGGCTCCCCGTCGTACTGCTTA	TAAGCAGTACGACGGGGAGCCGTT
1846	CCTATACCGTCGTGGTTCCACGTT	AACGTGGAACCACGACGGTATAGG
1847	CCGCGCAGGCGCTAATACTCAAGG	CCTTGAGTATTAGCGCCTGCGCGG
1848	AAATGGGCCAGTGAAATCCTTGGT	ACCAAGGATTTCACTGGCCCATTT
1849	ACGGTTTCGAATACTGCTGGGCAG	CTGCCCAGCAGTATTCGAAACCGT
1850	CCGCTTGAGGTTCAGGTGAGAGCT	AGCTCTGACCTGAACCTCAAGCGG
1851	ATCGTGCCCGAAGACACTTAAACG	CGTTTAAGTGTCTTCGGGCACGAT
1852	ACCTGAACCAGGGCGATTGCTTTA	TAAAGCAATCGCCCTGGTTCAGGT
1853	ACCCTATACGCTGGGCTAAGCGGG	CCCGCTTAGCCCAGCGTATAGGGT
1854	TGTTTCGCGACTAGAAGCCTTTGC	GCAAAGGCTTCTAGTCGCGAAACA
1855	GAAGTTGGCGGCTCACCCGTATTA	TAATACGGGTGAGCCGCCAACTTC
1856	TGGCTACACCGCTTAGGAGGAACC	GGTTCCTCCTAAGCGGTGTAGCCA
1857	CCACAGTTGCGTGACTTACATCGC	GCGATGTAAGTCACGCAACTGTGG
1858	ACTGCCACTGCGTCTGAAGAGTGG	CCACTCTTCAGACGCAGTGGCAGT
1859	GCGCCAGCAAATTTCGTGTGGTGT	ACACCACACGAAATTTGCTGGCGC
1860	TGCCTCCGTCGAGCCGAATAGCCA	TGGCTATTCGGCTCGACGGAGGCA
1861	GTACAAACGGGCGCTATTTCGTCC	GGACGAAATAGCGCCCGTTTGTAC
1862	GCTTCCCTGGCTCTGAACGGAAAC	GTTTCCGTTCAGAGCCAGGGAAGC
1863	CGGCTACCCAGGCAGATAAGCTGA	TCAGCTTATCTGCCTGGGTAGCCG
1864	GGTTGGACCCGACAGGGAATTTCC	GGAAATTCCCTGTCGGGTCCAACC
1865	GGGGAATACCCGGCGTTTGTAATA	TATTACAAACGCCGGGTATTCCCC
1866	TGGTTCGGTGAGGTTATGTTCGGT	ACCGAACATAACCTCACCGAACCA
1867	TCGGTAGGGTTCAGTCGCTGAGGA	TCCTCAGCGACTGAACCCTACCGA
1868	TTCGGAGTGTGCCGGTGCTAGTAC	GTACTAGCACCGGCACACTCCGAA
1869	TCGTACTGGAATGATGGCCGGGCC	GGCCCGGCCATCATTCCAGTACGA
1870	TCCGTCGACCGTCCAGCGAAGTTT	AAACTTCGCTGGACGGTCGACGGA
1871	AGGGAATATAACAACACCGCGCAC	GTGCGCGGTGTTGTTATATTCCCT
1872	ATGTCCCGGAAACCAGCTACCTCA	TGAGGTAGCTGGTTTCCGGGACAT
1873	ACCAGCGACTTAGATAGCCGTCCG	CGGACGGCTATCTAAGTCGCTGGT
1874	GGAAAACCTCCTTTGCGTCAACCA	TGGTTGACGCAAAGGAGGTTTTCC
1875	ACGTGCGTGCATACCCAAGAGGAC	GTCCTCTTGGGTATGCACGCACGT
1876	ACGCCACTTTCCCTAGAACCAACG	CGTTGGTTCTAGGGAAAGTGGCGT
1877	CGAAGTACGCAATAGTGCCACCCT	AGGGTGGCACTATTGCGTACTTCG
1878	GATCCCGGCGGATCACCTATCAAT	ATTGATAGGTGATCCGCCGGGATC
1879	AGAAAGCGACCGTTTCAGGCTAGC	GCTAGCCTGAAACGGTCGCTTTCT
1880	CGCTCCCTTTCATAGTCCTCTCCG	CGGAGAGGACTATGAAAGGGAGCG
1881	GTGGGTGGTCATAACGACAGCAGA	TCTGCTGTCGTTATGACCACCCAC
1882	CTGGAGGCTGCATCGTTCGTAACA	TGTTACGAACGATGCAGCCTCCAG
1883	CACCATGAGTTTCGGAGCGAGGAT	ATCCTCGCTCCGAAACTCATGGTG
1884	CAAGCTGCGTTCGATGAGAGATTG	CAATCTCTCATCGAACGCAGCTTG
1885	CCTGGGAGCAATGACCGCTCTGGT	ACCAGAGCGGTCATTGCTCCCAGG
1886	TCCGGCGCTCTACCAAGATGAGAC	GTCTCATCTTGGTAGAGCGCCGGA
1887	CGACCGCGTCGCGTATACTATCCG	CGGATAGTATACGCGACGCGGTCG
1888	AACATTCGCTAGTGGGGTCCAACA	TGTTGGACCCCACTAGCGAATGTT
1889	TGTATGATCATCCGACCGAGCAGC	GCTGCTCGGTCGGATGATCATACA
1890	AGTGCGCCGAGAGGGTGAATAGAC	GTCTATTCACCCTCTCGGCGCACT
1891	AGGCTTGTTCTGGACCAGCACCAT	ATGGTGCTGGTCCAGAACAAGCCT
1892	GGGGCCACATAAAGAATTCCGAAC	GTTCGGAATTCTTTATGTGGCCCC
1893	TGGTGAAGATAAATCCGCATGGCA	TGCCATGCGGATTTATCTTCACCA
1894	ATTTCCACCACGCTCTTGCCAAAT	ATTTGGCAAGAGCGTGGTGGAAAT
1895	CGCGTAAAGCTGTCACCGATGACC	GGTCATCGGTGACAGCTTTACGCG
1896	TCCCCAACCGGTAACAACAGCGAC	GTCGCTGTTGTTACCGGTTGGGGA
1897	CCTCTGCTCGCCTTACACCCATGG	CCATGGGTGTAAGGCGAGCAGAGG
1898	CAAGCTGCTCCTGTGCTGAAGGGC	GCCCTTCAGCACAGGAGCAGCTTG
1899	AAACGAACGATGGTCGGTAGACCG	CGGTCTACCGACCATCGTTCGTTT
1900	TCAGTTCGATGGCTATTGCGCCTC	GAGGCGCAATAGCCATCGAACTGA
1901	GGCTCTCAACGGACGCAAATCATA	TATGATTTGCGTCCGTTGAGAGCC
1902	AGTAGAGTGTTGCGGCTGCCGATC	GATCGGCAGCCGCAACACTCTACT
1903	AGACACTAGACCGCCGTGACCTGA	TCAGGTCACGGCGGTCTAGTGTCT
1904	ACCGAGCACCGAATTTCCTTGTCC	GGACAAGGAAATTCGGTGCTCGGT
1905	CCGTGGCCAAGATACGAACGAATT	AATTCGTTCGTATCTTGGCCACGG
1906	CCTCCTACAGCATCCACATGAGGG	CCCTCATGTGGATGCTGTAGGAGG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1907	CACTCGGCAAATACGTATGCGCAT	ATGCGCATACGTATTTGCCGAGTG
1908	ACCGAGTTGAAGCACGAATTTGGG	CCCAAATTCGTGCTTCAACTCGGT
1909	GACCACCTCGGAAGATCGTTCTGC	GCAGAACGATCTTCCGAGGTGGTC
1910	TCAACTGGGCAAACGAAGAGCACA	TGTGCTCTTCGTTTGCCCAGTTGA
1911	GCTTAGCCTCACACGTGCATACCA	TGGTATGCACGTGTGAGGCTAAGC
1912	CTGCGGTCTCCAAGTACCATTTCG	CGAAATGGTACTTGGAGACCGCAG
1913	GTTCCGTATTACGGCGGCCATAAG	CTTATGGCCGCCGTAATACGGAAC
1914	ATCGACGCAACCGGATAGTCTCTG	CAGAGACTATCCGGTTGCGTCGAT
1915	CGCAGATAAACCGGCATCTTTCAG	CTGAAAGATGCCGGTTTATCTGCG
1916	ACCTGCCAATACGGGTCTACGGTT	AACCGTAGACCCGTATTGGCAGGT
1917	ACACCTGTTGCCATGCTGATCCGT	ACGGATCAGCATGGCAACAGGTGT
1918	AAACTGTCTACTGCGCAATTCCGC	GCGGAATTGCGCAGTAGACAGTTT
1919	GCAACTAGCCCGTGCTAGGATCGT	ACGATCCTAGCACGGGCTAGTTGC
1920	TCGTAGTGGTGGATTGTTGTGCGT	ACGCACAACAATCCACCACTACGA
1921	GGCTTACTCCTCAATTGCGACACG	CGTGTCGCAATTGAGGAGTAAGCC
1922	CACGACTCCCTGCCAGATTTGATT	AATCAAATCTGGCAGGGAGTCGTG
1923	CTTAGACGTCGGCAATGTCACGTC	GACGTGACATTGCCGACGTCTAAG
1924	CTCAGAGCACAATCTGCCCTGCCT	AGGCAGGGCAGATTGTGCTCTGAG
1925	GCTAGGAAAGTCGGCATTCATGGG	CCCATGAATGCCGACTTTCCTAGC
1926	AAAGCCCCAAAATTCCGCCTAACC	GGTTAGGCGGAATTTTGGGGCTTT
1927	GCGCAACGCTAAGGGACTATCAAG	CTTGATAGTCCCTTAGCGTTGCGC
1928	CGTCCGCTGGGATGAGTCTCCTGC	GCAGGAGACTCATCCCAGCGGACG
1929	ACAGGCCTCGTGATTGGTGTGGGT	ACCCACACCAATCACGAGGCCTGT
1930	CATTCTCCTTCCGGGACCACGCCT	AGGCGTGGTCCCGGAAGGAGAATG
1931	TCGGAGTTGACCAAGCTCAGTGCG	CGCACTGAGCTTGGTCAACTCCGA
1932	ACGCGCCACTGCAATTGCAAACAC	GTGTTTGCAATTGCAGTGGCGCGT
1933	AGTTCATGGAGCCGGCGTATTGTT	AACAATACGCCGGCTCCATGAACT
1934	ACGTTTAATGCGGGGCCCGCCTAC	GTAGGCGGGCCCCGCATTAAACGT
1935	TGAGGCTTTAGCCTACGCGCAGGT	ACCTGCGCGTAGGCTAAAGCCTCA
1936	CAGCGTTATGAGCGCGGAGTTTAT	ATAAACTCCGCGCTCATAACGCTG
1937	GTCCACGTGACCACGGATAGTTGG	CCAACTATCCGTGGTCACGTGGAC
1938	GATTATGCTCCTACGCCTGCTCCG	CGGAGCAGGCGTAGGAGCATAATC
1939	TCGTCAAGGGCATGATGTGTGGGA	TCCCACACATCATGCCCTTGACGA
1940	GATGGACCGCCAAAGACACCTTGA	TCAAGGTGTCTTTGGCGGTCCATC
1941	TACACGAGGATGGGGTCAAGCTTT	AAAGCTTGACCCCATCCTCGTGTA
1942	ACACGCACAAAACGTTTGAAAGGC	GCCTTTCAAACGTTTTGTGCGTGT
1943	GTTATCGTGGGCCGATGGTACTGA	TCAGTACCATCGGCCCACGATAAC
1944	ACATGACCGTATCCGCCTGCTTCG	CGAAGCAGGCGGATACGGTCATGT
1945	GAAGGCGAACCACTGAAACTACGC	GCGTAGTTTCAGTGGTTCGCCTTC
1946	TGACTTTTGCAACGGGTGGAACCA	TGGTTCCACCCGTTGCAAAAGTCA
1947	TGAATTCGTAGGTTTTGGGTGCGG	CCGCACCCAAAACCTACGAATTCA
1948	AGCATTTATGAAGCGGCCATTGCG	CGCAATGGCCGCTTCATAAATGCT
1949	TGCTCCTCGCGTTGGTACCGTGAG	CTCACGGTACCAACGCGAGGAGCA
1950	CGCAGCAAGAAACAGCAACTGTTG	CAACAGTTGCTGTTTCTTGCTGCG
1951	AGACGCTTGGAGTGAAAACTCGGA	TCCGAGTTTTCACTCCAAGCGTCT
1952	CATTCGTAGAATGCCCCAAATGGA	TCCATTTGGGGCATTCTACGAATG
1953	CCAGAAGGTTCGGGACCCGTCGTG	CACGACGGGTCCCGAACCTTCTGG
1954	GAGAAGCCGGTTCTCAGAGCACAT	ATGTGCTCTGAGAACCGGCTTCTC
1955	TTGCGTTGCAAGATATCTGGCCCG	CGGGCCAGATATCTTGCAACGCAA
1956	GGGTTGCATGTTCAGGCAAGACGA	TCGTCTTGCCTGAACATGCAACCC
1957	CTCACGAAGGTGACATATCACGCC	GGCGTGATATGTCACCTTCGTGAG
1958	GCCCGAGATACGGGTTCAAAAAGA	TCTTTTTGAACCCGTATCTCGGGC
1959	CATCTTCGCGCTTCTTCACTCCGC	GCGGAGTGAAGAAGCGCGAAGATG
1960	TTACACGGTAAGCGTACGGCCGCC	GGCGGCCGTACGCTTACCGTGTAA
1961	ACCTTCGGACAATGTGGCGTTCGC	GCGAACGCCACATTGTCCGAAGGT
1962	TGAATGGTTCTGCTAGGCCCACAC	GTGTGGGCCTAGCAGAACCATTCA
1963	CACGCCTGTCTGACATATGGATGC	GCATCCATATGTCAGACAGGCGTG
1964	CGCCTCAACCCAATCTGAGAACGT	ACGTTCTCAGATTGGGTTGAGGCG
1965	TTACGCTTACTGCGAGCTGGGTCC	GGACCCAGCTCGCAGTAAGCGTAA
1966	GGCTTGTGGGGCAATACGCATCTT	AAGATGCGTATTGCCCCACAAGCC
1967	CACTCTCCTTTGGATGCGGAACAA	TTGTTCCGCATCCAAAGGAGAGTG
1968	GACCAGCCATCACGTAACGGCCCT	AGGGCCGTTACGTGATGGCTGGTC
1969	AGGAACCGGATGTGGTTATGGAGC	GCTCCATAACCACATCCGGTTCCT
1970	ATCCATGGGCAACTGAGCCTATGC	GCATAGGCTCAGTTGCCCATGGAT
1971	GGAACAGCACTTGTTACCGCCCAC	GTGGGCGGTAACAAGTGCTGTTCC
1972	TGGCTCGCTTCAAGCCTGTTTGCT	AGCAAACAGGCTTGAAGCGAGCCA
1973	CAAACGTGAGGTCATGACCACCAT	ATGGTGGTCATGACCTCACGTTTG
1974	ACCGATGTCTTGAAGTCCGGAGGT	ACCTCCGGACTTCAAGACATCGGT
1975	CGAAAATGCATGATGATCTCCCCT	AGGGGAGATCATCATGCATTTTCG
1976	TTTGGTATTCTCGCTGCACCGTTG	CAACGGTGCAGCGAGAATACCAAA
1977	GCGTACTCAACCACATTCCCGACC	GGTCGGGAATGTGGTTGAGTACGC
1978	AGCAAACAACAGCGGTCCGAGCAT	ATGCTCGGACCGCTGTTGTTTGCT
1979	GGACTAGGAGCGGGGATAGCTGAG	CTCAGCTATCCCCGCTCCTAGTCC
1980	CCTTAACGAAAACCTGTCGACCGC	GCGGTCGACAGGTTTTCGTTAAGG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
1981	CTCGATCGCATAAGCAAGAAACCG	CGGTTTCTTGCTTATGCGATCGAG
1982	CCCGTTGTTTGGGCGACAAAAAGT	ACTTTTTGTCGCCCAAACAACGGG
1983	CGGCGGCTCTCGCATGATCTCGTT	AACGAGATCATGCGAGAGCCGCCG
1984	CGGATGGAGAGGAGTCTACGTCCC	GGGACGTAGACTCCTCTCCATCCG
1985	CAGAACAATATCGTGCGTCAACCG	CGGTTGACGCACGATATTGTTCTG
1986	CCTTTGCGCGCTCCGAGTAAGGTA	TACCTTACTCGGAGCGCGCAAAGG
1987	GGAAACGGCACCTATCTGTCGTGA	TCACGACAGATAGGTGCCGTTTCC
1988	CGACCGACAAAACCAAATGCCGCC	GGCGGCATTTGGTTTTGTCGGTCG
1989	CCAAGGGTGTGGGAGCTGAAGAGA	TCTCTTCAGCTCCCACACCCTTGG
1990	TTAAGTGCGCATAGTCCTCGTGGG	CCCACGAGGACTATGCGCACTTAA
1991	GCCTGGTGGGGTAAGTCATGATGC	GCATCATGACTTACCCCACCAGGC
1992	GAGCAGCAGATTGATGCGCTTATG	CATAAGCGCATCAATCTGCTGCTC
1993	TGCGCCAACTTCCGGAATATTTGC	GCAAATATTCCGGAAGTTGGCGCA
1994	AACCCCATCATGAAATGCTCTCCG	CGGAGAGCATTTCATGATGGGGTT
1995	GTCCAACGGTACTGGCGTGATGTT	AACATCACGCCAGTACCGTTGGAC
1996	ACTCGGCTGATCGTGAGATGGTGA	TCACCATCTCACGATCAGCCGAGT
1997	ATTCGTGGGCGCATCTCGGTATGT	ACATTCCGAGATGCGCCCACGAAT
1998	TCCCGTCCTGTAATCCAGGGAACA	TGTTCCCTGGATTACAGGACGGGA
1999	CTTCGCTGCACCTACATTGCGCCA	TGGCGCAATGTAGGTGCAGCGAAG
2000	GCGTGTAGATGACTGTGCTTTGGG	CCCAAAGCACAGTCATCTACACGC
2001	CTATGGTATCGAGACATCGGCGGA	TCCGCCGATGTCTCGATACCATAG
2002	CCTCGTACTCCGTCGTATGCACAA	TTGTGCATACGACGGAGTACGAGG
2003	TGGTGCGTCCGTAGTGCCTGCACT	AGTGCAGGCACTACGGACGCACCA
2004	CGCGATCCTAGTTGAAAGCTTTGC	GCAAAGCTTTCAACTAGGATCGCG
2005	ACGATCCAGGTGTTGGGCACTAAG	CTTAGTGCCCAACACCTGGATCGT
2006	CCAATCTAGGATACACCACGCCCG	CGGGCGTGGTGTATCCTAGATTGG
2007	GATACGTGGGGTATAGGCGGGCCC	GGGCCCGCCTATACCCCACGTATC
2008	CATGGAACAAACCGTCGTAGGGGA	TCCCCTACGACGGTTTGTTCCATG
2009	ACACTCGCGCAGTATTCGAGTCGT	ACGACTCGAATACTGCGCGAGTGT
2010	CTCAGTCTCGAAGGTGATCCGACC	GGTCGGATCACCTTCGAGACTGAG
2011	TCCCAATCCCCGTGGTATCGTCGT	ACGACGATACCACGGGGATTGGGA
2012	AATCAACGTAGTTCCGGTGGTCCG	CGGACCACCGGAACTACGTTGATT
2013	CTTAACAACCCAGGGGTTTGGGCT	AGCCCAAACCCCTGGGTTGTTAAG
2014	CTACCGCTGCATGGCGTTAGATTG	CAATCTAACGCCATGCAGCGGTAG
2015	TTATTGGTGGCGGACGGAGTGAGT	ACTCACTCCGTCCGCCACCAATAA
2016	TTAAGGGTGAACTCAACCGCGTGA	TCACGCGGTTGAGTTCACCCTTAA
2017	TTTGATTGAAACGCTGCGCACTAC	GTAGTGCGCAGCGTTTCAATCAAA
2018	TCATGTGTAGGTCGCGGCCGTCAC	GTGACGGCCGCGACCTACACATGA
2019	CTCCGAACCTTCTGGGCCTCTTTT	AAAAGAGGCCCAGAAGGTTCGGAG
2020	CTGTTGCCCATTGGCCCGACACTC	GAGTGTCGGGCCAATGGGCAACAG
2021	CACGATCGCTGAGCAACACATCAC	GTGATGTGTTGCTCAGCGATCGTG
2022	CGGATCATAAGCGTCCGCCTTCGT	ACGAAGGCGGACGCTTATGATCCG
2023	AGGTTAACGCAACATGTGATCCGC	GCGGATCACATGTTGCGTTAACCT
2024	GGGAAAAACAGCTAAGCCTTGCGA	TCGCAAGGCTTAGCTGTTTTTCCC
2025	ACTTATTGCCGGGATCCGTACACA	TGTGTACGGATCCCGGCAATAAGT
2026	TGCGGTCTGGAAAGGAAGGGAGGG	CCCTCCCTTCCTTTCCAGACCGCA
2027	GCTGCCACCTGGACATCGCATACA	TGTATGCGATGTCCAGGTGGCAGC
2028	GCAGGCATGACAGTGGCGTAGTAC	GTACTACGCCACTGTCATGCCTGC
2029	GCGGCCCTGATGGTTTGGCTGAGC	GCTCAGCCAAACCATCAGGGCCGC
2030	TCCCCATTTAGTCCCCTCCATCAC	GTGATGGAGGGGACTAAATGGGGA
2031	GCAACACAAATGCGAGCGTAGGAG	CTCCTACGCTCGCATTTGTGTTGC
2032	GGCGTTTGTATTCGAGCCACGTAG	CTACGTGGCTCGAATACAAACGCC
2033	GGTAACGTCGCACGTGGAATTCCG	CGGAATTCCACGTGCGACGTTACC
2034	ACTTCACAACGCTCCGTTGGACAC	GTGTCCAACGGAGCGTTGTGAAGT
2035	CCGAATTATAAAGCGCAAGGCACA	TGTGCCTTGCGCTTTATAATTCGG
2036	GGACCCGATAAGACTCTGACGCCG	CGGCGTCAGAGTCTTATCGGGTCC
2037	ACCCGTTTCTCGTAGGAACCTGCT	AGCAGGTTCCTACGAGAAACGGGT
2038	CACGTTCGACTGTATCTGGTTGCC	GGCAACCAGATACAGTCGAACGTG
2039	CCTCGGATGGGCCCATGACCTTGA	TCAAGGTCATGGGCCCATCCGAGG
2040	GGACGCCTGCTGTAGGGGTTTGAT	ATCAAACCCCTACAGCAGGCGTCC
2041	CTCGAGCGTGGGCTAAAAGAGCAT	ATGCTCTTTTAGCCCACGCTCGAG
2042	TTTACTTCTTAGGGCGCGTTTGGG	CCCAAACGCGCCCTAAGAAGTAAA
2043	ACCACCAACATAGCGCGCACTAGT	ACTAGTGCGCGCTATGTTGGTGGT
2044	TGGTTACACGGCAGCCCGCGTAAG	CTTACGCGGGCTGCCGTGTAACCA
2045	TTATGGTACGTTGCTGCGTGCGGG	CCCGCACGCAGCAACGTACCATAA
2046	ACCGCGGATCTAACGAATCCCATT	AATGGGATTCGTTAGATCCGCGGT
2047	CATGATCCCGCCCTTAGGTTAAGC	GCTTAACCTAAGGGCGGGATCATG
2048	TACCGCTTCAAAGGGTTGCCGAAT	ATTCGGCAACCCTTTGAAGCGGTA
2049	GCACCGCGTCAATATTACCGAGGA	TCCTCGGTAATATTGACGCGGTGC
2050	GTGTCGCGGCTTTACAGAAGGAGA	TCTCCTTCTGTAAAGCCGCGACAC
2051	GCAAGCCATACCGCAATAAACTCG	CGAGTTTATTGCGGTATGGCTTGC
2052	ATGAGGTCGTGCTGCGTTCACGAG	CTCGTGAACGCAGCACGACCTCAT
2053	CGAGACTAGTGCCGATGCAGGGTA	TACCCTGCATCGGCACTAGTCTCG
2054	GCCTCATCATAGACGCTGGATGCA	TGCATCCAGCGTCTATGATGAGGC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2055	GACAGGCGTCGGTAAGCTCTCAAG	CTTGAGAGCTTACCGACGCCTGTC
2056	GCTACGAATCTTCCCTGTCGCCAC	GTGGCGACAGGGAAGATTCGTAGC
2057	TTTGGCAGAACGTACCAGTGGGGT	ACCCCACTGGTACGTTCTGCCAAA
2058	GGACAATAAGCACCGGAGAATGCG	CGCATTCTCCGGTGCTTATTGTCC
2059	TCATGAACCTTCTGATGCCGCGAA	TTCGCGGCATCAGAAGGTTCATGA
2060	CGCCGCATTACCTTAAAAACGTGC	GCACGTTTTTAAGGTAATGCGGCG
2061	ACGAGTCCAACCGCCTCATTGATT	AATCAATGAGGCGGTTGGACTCGT
2062	GCGAAGAGTTGCTACTCTTCCGCC	GGCGGAAGAGTAGCAACTCTTCGC
2063	CGTCGGCAACAATCTTTTTCGTGA	TCACGAAAAAGATTGTTGCCGACG
2064	AATCCTGTGCACCCGTGAGACGCG	CGCGTCTCACGGGTGCACAGGATT
2065	AACCTATATGCATCAACGCGAGCC	GGCTCGCGTTGATGCATATAGGTT
2066	GAACTTGGCAAAACAGCCCGGAAA	TTTCCGGGCTGTTTTGCCAAGTTC
2067	CTCTATGGCCGTTTGCCGTCTGCA	TGCAGACGGCAAACGGCCATAGAG
2068	AGTGCACCGGGTTGTGGACACAAT	ATTGTGTCCACAACCCGGTGCACT
2069	CCTGGCTTTTCACACGCCAAGAAA	TTTCTTGGCGTGTGAAAAGCCAGG
2070	CACTCAGCGTAGCCTGAAGCCTGG	CCAGGCTTCAGGCTACGCTGAGTG
2071	GAATTATCGACCGCAGCGGTGTCG	CGACACCGCTGCGGTCGATAATTC
2072	GTGACATCACATGGTGGCCGAGCG	CGCTCGGCCACCATGTGATGTCAC
2073	AGCACCTTGCCGAGTCACCAGTGA	TCACTGGTGACTCGGCAAGGTGCT
2074	TAGGTTGCAGGAATGGTGGGCACC	GGTGCCCACCATTCCTGCAACCTA
2075	GTCCCATACGTGTGGTACGCGGAT	ATCCGCGTACCACACGTATGGGAC
2076	TCGGATACTCTCGCGTGCCACGGG	CCCGTGGCACGCGAGAGTATCCGA
2077	CAACGTTCGCCCCTAAGCCCAAAT	ATTTGGGCTTAGGGGCGAACGTTG
2078	GTTAGGTCACCGCGGCATATCCTA	TAGGATATGCCGCGGTGACCTAAC
2079	GTTCACCGGCCTCTACTTGGGTTT	AAACCCAAGTAGAGGCCGGTGAAC
2080	AATCCGCGTCTAGGTCATGTGGTC	GACCACATGACCTAGACGCGGATT
2081	GCTACGCCTCTGGAGGTGGTACCC	GGGTACCACCTCCAGAGGCGTAGC
2082	CAGGGAATGCTACAAAGGGTCCAA	TTGGACCCTTTGTAGCATTCCCTG
2083	AAGGGTTAGCTGCCCGGTTAACAG	CTGTTAACCGGGCAGCTAACCCTT
2084	CCTCGCAAGCGCGATATTTATGCC	GGCATAAATATCGCGCTTGCGAGG
2085	GCCTCCCGGTCATGGTCAAGGGAA	TTCCCTTGACCATGACCGGGAGGC
2086	GCTGTTGAGCGGCGACCTGTGCAC	GTGCACAGGTCGCCGCTCAACAGC
2087	CGCTGACTTAGCTCTGATGTGCCG	CGGCACATCAGAGCTAAGTCAGCG
2088	TTCATGGCATTCATCACGAAGGAA	TTCCTTCGTGATGAATGCCATGAA
2089	TAGTGTTATGCCCGCGTGTGAATG	CATTCACACGCGGGCATAACACTA
2090	CATGTAAGGGCACGGTCGTGGGCA	TGCCCACGACCGTGCCCTTACATG
2091	CAGGAAGCTCGCTCCGTGATGCAC	GTGCATCACGGAGCGAGCTTCCTG
2092	CCTGCTGATAGCAACCTCACTGCA	TGCAGTGAGGTTGCTATCAGCAGG
2093	ACTACGAGGGGCAGGGTCTAGGCG	CGCCTAGACCCTGCCCCTCGTAGT
2094	CATAATGTGGGTGCTGACGCCGAT	ATCGGCGTCAGCACCCACATTATG
2095	TAGCGAATCCACACAGAGCCGCTC	GAGCGGCTCTGTGTGGATTCGCTA
2096	TCGCGAAATCCCTAAATGCTGTGC	GCACAGGATTTAGGGATTTCGCGA
2097	TGGCACGAATCAAGCCACCAACTC	GAGTTGGTGGCTTGATTCGTGCCA
2098	GCGGACCGTCTTTGCTATCTGACG	CGTCAGATAGCAAAGACGGTCCGC
2099	AGGCCCCGCCTTGTAATTGGTCAT	ATGACCAATTACAAGGCGGGGCCT
2100	CTGGTCCCATACGCCGCTGACTAG	CTAGTCAGCGGCGTATGGGACCAG
2101	TGCTAACTGCGGCCCTACAGAGTC	GACTCTGTAGGGCCGCAGTTAGCA
2102	TGGTTTTATGTTCGGTAGCGTCCG	CGGACGCTACCGAACATAAAACCA
2103	AGCTCAAACTTCTCCCACGGGATG	CATCCCGTGGGAGAAGTTTGAGCT
2104	CGCGAAGATAGTGAAATCCGCATC	GATGCGGATTTCACTATCTTCGCG
2105	GAGTGAAACCTCTCGCGGGTTGCA	TGCAACCCGCGAGAGGTTTCACTC
2106	TCGAATGCTCTGCAGTGACGTCAA	TTGACGTCACTGCAGAGCATTCGA
2107	AGGTGGCAATGATCGACGACCCTG	CAGGGTCGTCGATCATTGCCACCT
2108	GTCCGGAGCCGTGCAAAGCAATAA	TTATTGCTTTGCACGGCTCCGGAC
2109	CTTTTGGGGATTAGAGGCCGACAA	TTGTCGGCCTCTAATCCCCAAAAG
2110	GGCATAAAGGCTTCCGTTCCTGTC	GACAGGAACGGAAGCCTTTATGCC
2111	GCGGACCGTAAAGCGGGCAGATAG	CTATCTGCCCGCTTTACGGTCCGC
2112	TTTCAAGAGTGCATCGAATCCACG	CGTGGATTCGATGCACTCTTGAAA
2113	CCGGCATCCCTTCTCGCTGTTGCC	GGCAACAGCGAGAAGGGATGCCGG
2114	ACACAGAGACGCGAACGGAGTGCA	TGCACTCCGTTCGCGTCTCTGTGT
2115	AGCGGCATTCTCCCACTCGTTACT	AGTAACGAGTGGGAGAATGCCGCT
2116	GGAGCGTACTGCGCCTCGCAAGTC	GACTTGCGAGGCGCAGTACGCTCC
2117	AAACCCGAATGACACGGCAGATAA	TTATCTGCCGTGTCATTCGGGTTT
2118	AACCAGCGGATCGATAAAACGACA	TGTCGTTTTATCGATCCGCTGGTT
2119	GGTGTCCACCCGTTAACGCCGGTA	TACCGGCGTTAACGGGTGGACACC
2120	AGCGCGACGTGGCTTGCCGTTAAA	TTTAACGGCAAGCCACGTCGCGCT
2121	TCCCACGGCTATAGGTCCAACGAC	GTCGTTGGACCTATAGCCGTGGGA
2122	ATCAACGAACGATGCCGTTAGGTG	CACCTAACGGCATCGTTCGTTGAT
2123	GAGGCTAAGCCGTATGGCCGAGGC	GCCTCGGCCATACGGCTTAGCCTC
2124	ACGGTCCGAAATGGTTAGAGGCAC	GTGCCTCTAACCATTTCGGACCGT
2125	ACGCAAACCATTCCTCGAGTAGGC	GCCTACTCGAGGAATGGTTTGCGT
2126	TTACACGCTCGCTATTGGGCCATA	TATGGCCCAATAGCGAGCGTGTAA
2127	CTCGGCACGGGTTTAGAACGCCGG	CCGGCGTTCTAAACCCGTGCCGAG
2128	ATTCGGTAAGGTATCGGGCTAGCG	CGCTAGCCCGATACCTTACCGAAT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2129	AGCACACCGTTATACATGACGGCG	CGCCGTCATGTATAACGGTGTGCT
2130	AGTCCCTGCCGTTCGCTCATGGAA	TTCCATGAGCGAACGGCAGGGACT
2131	GGGCTTATGACCAGTCAGGTTGGA	TCCAACCTGACTGGTCATAAGCCC
2132	GGTCACCACACGAGTGCCTGGTCT	AGACCAGGCACTCGTGTGGTGACC
2133	TTGATCGTGTCTCCCGAAACCCTC	GAGGGTTTCGGGAGACACGATCAA
2134	ATTGTCGCGATCGGCATTTCTTAA	TTAAGAAATGCCGATCGCGACAAT
2135	GGGTCCAACGACTTCTCGCTGCTG	CAGCAGCGAGAAGTCGTTGGACCC
2136	CAAATTCCTTGGGGGCCATAGTGG	CCACTATGGCCCCCAAGGAATTTG
2137	CCAGAGTATCCGCCGTTAGACGGT	ACCGTCTAACGGCGGATACTCTGG
2138	TCCTGCAGATCATCTCGTGTCTGG	CCAGACACGAGATGATCTGCAGGA
2139	TGCGGGAGATTTGAACAAGCTGTA	TACAGCTTGTTCAAATCTCCCGCA
2140	TTAGACGCCGAGCTAGGCAACGTC	GACGTTGCCTAGCTCGGCGTCTAA
2141	TTTCGGCAGAATCTCCGATTCAAC	GTTGAATCGGAGATTCTGCCGAAA
2142	TGGCGAGCAGACCTACAAGACAGA	TCTGTCTTGTAGGTCTGCTCGCCA
2143	GGCGACAGACCGGTACATCGGCCA	TGGCCGATGTACCGGTCTGTCGCC
2144	TCTAGACCTGCGTTTCGTGGGACC	GGTCCCACGAAACGCAGGTCTAGA
2145	GCCGAGCGTGGTACCATACGTTCA	TGAACGTATGGTACCACGCTCGGC
2146	TAATCACACCCGCTTTCTGTGGCT	AGCCACAGAAAGCGGGTGTGATTA
2147	GGCCGGAGCCATTGGACACTTCTT	AAGAAGTGTCCAATGGCTCCGGCC
2148	CCTGTAGACCTGCATGGATCGCTG	CAGCGATCCATGCAGGTCTACAGG
2149	ATCGCCGTTCCCGCAAAATAAGCA	TGCTTATTTTGCGGGAACGGCGAT
2150	TGGATCAACGGGGTAGTGAAAACG	CGTTTTCACTACCCCGTTGATCCA
2151	AAGCGACGATGCTTTCTTGAGCTG	CAGCTCAAGAAAGCATCGTCGCTT
2152	CACGGGCACGTGTTCTACGCTTGC	GCAAGCGTAGAACACGTGCCCGTG
2153	ACGGGCTGGGACAAGAGCTAGAAA	TTTCTAGCTCTTGTCCCAGCCCGT
2154	GGTAACTGGCTCCGCTCTCACATC	GATGTGAGAGCGGAGCCAGTTACC
2155	ACTCTGGCTGTTGGCGAACGTGAC	GTCACGTTCGCCAACAGCCAGAGT
2156	GACCGAGGACCAGTCCTTGCTCTC	GAGAGCAAGGACTGGTCCTCGGTC
2157	AGTAGCTCTTGCGGCCTAACGGCA	TGCCGTTAGGCCGCAAGAGCTACT
2158	TTCTTGTCCTGGGGGAGAGCAGTG	CACTGCTCTCCCCCAGGACAAGAA
2159	TTAGCAGGGAGGTTGTCGGCTCAT	ATGAGCCGACAACCTCCCTGCTAA
2160	AGAACGTGGATTGTACGCTCCGCC	GGCGGAGCGTACAATCCACGTTCT
2161	CTTCACAGCCTGGAGCCACCAATG	CATTGGTGGCTCCAGGCTGTGAAG
2162	GAGATCGATGAAACGCACCAGCGG	CCGCTGGTGCGTTTCATCGATCTC
2163	GGGTCCAGAGTTGGTGTGGGATAA	TTATCCCACACCAACTCTGGACCC
2164	CCGTCCACCCCAGATAGGAATCAC	GTGATTCCTATCTGGGGTGGACGG
2165	TGCCTCGCTTCTGTGAATCTACGA	TCGTAGATTCACAGAAGCGAGGCA
2166	GATCACAGCGTCCGCGCATAACGG	CCGTTATGCGCGGACGCTGTGATC
2167	ATGACGCCTTACATGACGCACCTT	AAGGTGCGTCATGTAAGGCGTCAT
2168	GCGTGGAATAACGCCCTTAGTTCA	TGAACTAAGGGCGTTATTCCACGC
2169	GGTCTACCATTTCTCGCCCGACCG	CGGTCGGGCGAGAAATGGTAGACC
2170	ACACCTCTCTGGCGTAGACGCTCA	TGAGCGTCTACGCCAGAGAGGTGT
2171	GTAGAGGTGCTCAGGACTCGTCGC	GCGACGAGTCCTGAGCACCTCTAC
2172	GTAAGCAGGAGGCGAAGGCGCGAA	TTCGCGCCTTCGCCTCCTGCTTAC
2173	TCTAAGGGCCGTTTCAATCGACCT	AGGTCGATTGAAACGGCCCTTAGA
2174	AACCTGATTTCAGGGTCAGCCCGA	TCGGGCTGACCCTGAAATCAGGTT
2175	GTCACGCGATTGGCCCACCTATTA	TAATAGGTGGGCCAATCGCGTGAC
2176	ACGATGCCGCGCATGTAACCTAGT	ACTAGGTTACATGCGCGGCATCGT
2177	TGAGAGATGTCTCGTCAACGCCTG	CAGGCGTTGACGAGACATCTCTCA
2178	GCATATCTCGCGGTGACAGACGAA	TTCGTCTGTCACCGCGAGATATGC
2179	GACCCAACGTCGAAATTGTGCGAT	ATCGCACAATTTCGACGTTGGGTC
2180	TGAAAATCGGGGCATCTAGTTTGG	CCAAACTAGATGCCCCGATTTTCA
2181	CCGCGAAAAGGATTTGTGTACGCA	TGCGTACACAAATCCTTTTCGCGG
2182	CATTCCATTTATCCGCAGTTCGCT	AGCGAACTGCGGATAAATGGAATG
2183	CCTGTCTGTCGAGCCAGCGTCTAT	ATAGACGCTGGCTCGACAGACAGG
2184	TCAGCGCGGCTAAACAAGTTATGC	GCATAACTTGTTTAGCCGCGCTGA
2185	ACGCCTACGAACGACCCAAGAGAG	CTCTCTTGGGTCGTTCGTAGGCGT
2186	TGCGCATCTACCATTGTGTGGATC	GATCCAGACAATGGTAGATGCGCA
2187	AAGTCCGCGCTCGCTCCTGTAATA	TATTACAGGAGCGAGCGCGGACTT
2188	GCTGGGTCATTGCTCGAGTAACCA	TGGTTACTCGAGCAATGACCCAGC
2189	TGGAGCGTTCTGGCAATGACCGAC	GTCGGTCATTGCCAGAACGCTCCA
2190	CAAGTCAATTCTTGGCCAATTCGG	CCGAATTGGCCAAGAATTGACTTG
2191	CGTTCATGCAAGGATCCCAGGTTA	TAACCTGGGATCCTTGCATGAACG
2192	ATGCCAATAGAAGCTGGGGATGCT	AGCATCCCCAGCTTCTATTGGCAT
2193	CCTAACTCTCCCTTGAGGCCGTTC	GAACGGCCTCAAGGGAGAGTTAGG
2194	ATCTCGGCGAAGGTTCCAAACATT	AATGTTTGGAACCTTCGCCGAGAT
2195	GCGACAGATTACGCTGCGGTTTTC	GAAAACCGCAGCGTAATCTGTCGC
2196	AAGCCCAGACGGCCAACACGTTAC	GTAACGTGTTGGCCGTCTGGGCTT
2197	TCAAGTTCAAATCACATCCCGTGG	CCACGGGATGTGATTTGAACTTGA
2198	GATTGTCGTTCTGTCTGTGAGGCG	CGCCTCACAGACAGAACGACAATC
2199	ACCGAACTATGTTCCGGCATGGCA	TGCCATGCCGGAACATAGTTCGGT
2200	CGTCATCGGGTGTGCAATGCCGTT	AACGGCATTGCACACCCGATGACG
2201	CGGACGGAGTCACGTTTGTGCACT	AGTGCACAAACGTGACTCCGTCCG
2202	TAAACAAGTCGTGTGCCTTTGCCG	CGGCAAAGGCACACGACTTGTTTA

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2203	TAATTACTGGCCTGTGGAGCAGGC	GCCTGCTCCACAGGCCAGTAATTA
2204	GGAGCGGCCCGAATGGTGCTCTTA	TAAGAGCACCATTCGGGCCGCTCC
2205	ACTAAGCAAGGCTTGGATGTGCGT	ACGCACATCCAAGCCTTGCTTAGT
2206	GGCAGCTCAGCGGCAGTACGCTAC	GTAGCGTACTGCCGCTGAGCTGCC
2207	GCGAGGCGAATTATCCGCGGATTT	AAATCCGCGGATAATTCGCCTCGC
2208	CATACGACACACCTTGGGGTGCTA	TAGCACCCCAAGGTGTGTCGTATG
2209	TGCTTGGGCTTTAAACCCCGTTTT	AAAACGGGGTTTAAAGCCCAAGCA
2210	CCGGTTGGAAAACGCAAATATCGG	CCGATATTTGCGTTTTCCAACCGG
2211	AAACTAGCTAGCCGCACCCGCAAG	CTTGCGGGTGCGGCTAGCTAGTTT
2212	GTTGTTCCACCAGTGATCACGCAG	CTGCGTGATCACTGGTGGAACAAC
2213	GCCGCTGACAAGATGATCATCGTT	AACGATGATCATCTTGTCAGCGGC
2214	CTTTCATAAAGCCAACCGATGCCC	GGGCATCGGTTGGCTTTATGAAAG
2215	CTGACTGCATCTCGAAAGCGGGTG	CACCCGCTTTCGAGATGCAGTCAG
2216	ATTTCTTCGGAGAATCGGCCACGT	ACGTGGCCGATTCTCCGAAGAAAT
2217	CATTTCGGGCCCTAGCTACTGCGC	GCGCAGTAGCTAGGGCCCGAAATG
2218	CCGATCCCGCACATCCGTATCCTG	CAGGATACGGATGTGCGGGATCGG
2219	TATCACCGGGAGCGTCTTATCGTG	CACGATAAGACGCTCCCGGTGATA
2220	TAGGGCTCGTGCACCGATTAGAGG	CCTCTAATCGGTGCACGAGCCCTA
2221	GCGTGGCACTCGCTTGTCTAGGTA	TACCTAGACAAGCGAGTGCCACGC
2222	CTCAACGAACTCAAGGGCCGCTAC	GTAGCGGCCCTTGAGTTCGTTGAG
2223	AGCCTGGTATCGACCAATCCTGCA	TGCAGGATTGGTCGATACCAGGCT
2224	TACGCGTTCTAGTTGGCCGGATCC	GGATCCGGCCAACTAGAACGCGTA
2225	TTTATGGGTTTGTGCCTGATGGGT	ACCCATCAGGCACAAACCCATAAA
2226	GGGACCCCTAGCAACGTCACCTTA	TAAGGTGACGTTGCTAGGGGTCCC
2227	CTGCCTCCCCAGGAGTCATTGGAT	ATCCAATGACTCCTGGGGAGGCAG
2228	AACCCCGCAAGACCAGTACCAATC	GATTGGTACTGGTCTTGCGGGGTT
2229	GGTCACATACGCGCTAAAAAGCGC	GCGCTTTTTAGCGCGTATGTGACC
2230	AAATGGCTCCGACCAGTTAGGGAC	GTCCCTAACTGGTCGGAGCCATTT
2231	AACGCGGCACGCTTAAAGGTGCAT	ATGCACCTTTAAGCGTGCCGCGTT
2232	GATCGCACGCCGATTAACCTTACA	TGTAAGGTTAATCGGCGTGCGATC
2233	CCTCCTGATTGGGAGTGCGGAATT	AATTCCGCACTCCCAATCAGGAGG
2234	CGGAGGGTAATAGGCTCCTCTGCG	CGCAGAGGAGCCTATTACCCTCCG
2235	ACAAGAACTGGACATTACCGCGGG	CCCGCGGTAATGTCCAGTTCTTGT
2236	TGTCGTCTTAAAGGCCTTTGTGCG	CGCACAAAGGCCTTTAAGACGACA
2237	GGTGACCATGTGGCGTTTTAGCTT	AAGCTAAAACGCCACATGGTCACC
2238	CACGGTTGCGCACGGTACCAGAAC	GTTCTGGTACCGTGCGCAACCGTG
2239	CCTTTATTGTTTGGTCCCCTGCCC	GGGCAGGGGACCAAACAATAAAGG
2240	GTGCGCCTGCATTCTACCGTCAAT	ATTGACGGTAGAATGCAGGCGCAC
2241	GTTTACGTTGATGGCTTGCCGCCG	CGGCGGCAAGCCATCAACGTAAAC
2242	CCGTCGGTGGTAGGACGTGAATGT	ACATTCACGTCCTACCACCGACGG
2243	TGATCGCCCCAGAATCCCTGTGCT	AGCACAGGGATTCTGGGGCGATCA
2244	AAGCAGCCAAAAATCGGTTGCTTT	AAAGCAACCGATTTTTGGCTGCTT
2245	CGACGGGACTTAGTAGCAGGGCCT	AGGCCCTGCTACTAAGTCCCGTCG
2246	CCGATTCGCGAAACGACCAAGTAG	CTACTTGGTCGTTTCGCGAATCGG
2247	CCACCCCAACTCCAATCTTTCTCA	TGAGAAAGATTGGAGTTGGGGTGG
2248	GTGCAGTAGACGACTACCGGCGTC	GACGCCGGTAGTCGTCTACTGCAC
2249	TTCGCCCATCGTATCAAGCAATTC	GAATTGCTTGATACGATGGGCGAA
2250	GAATCGCGACTACCCGTCGGGTCA	TGACCCGACGGGTAGTCGCGATTC
2251	CCAGCACTCGCCATCGGTTATAAT	ATTATAACCGATGGCGAGTGCTGG
2252	CGAACCGTAGAACTCCGGTCGGTG	CACCGACCGGAGTTCTACGGTTCG
2253	GCACCATGACAGAGCCCCAGGATG	CATCCTGGGGCTCTGTCATGGTGC
2254	TGGGCTACCGCAGAATAAGGGTGA	TCACCCTTATTCTGCGGTAGCCCA
2255	TGGCCTGTCGTGTCGAAGGAAACA	TGTTTCCTTCGACACGACAGGCCA
2256	GCCTCACCGATAGCGAGCGTTTGC	GCAAACGCTCGCTATCGGTGAGGC
2257	GTGCGCGCCGGCTAAAACGAGACA	TGTCTCGTTTTAGCCGGCGCGCAC
2258	CCGCAGACGAGTTTCTTGTGACAG	CTGTCACAAGAAACTCGTCTGCGG
2259	GTTCGCAATCGCGTGCTAGGAAGC	GCTTCCTAGCACGCGATTGCGAAC
2260	TGTTGTACACATGCATCCGGTGAA	TTCACCGGATGCATGTGTACAACA
2261	CACTGAACACGATATAAGGGCGCG	CGCGCCCTTATATCGTGTTCAGTG
2262	CGCGATGGTTCTTAGCAAGACGAT	ATCGTCTTGCTAAGAACCATCGCG
2263	TACACCAAGGAAGAAATGGGGACG	CGTCCCCATTTCTTCCTTGGTGTA
2264	CGTGCCTTGCGTTTTAGGTGCAGC	GCTGCACCTAAAACGCAAGGCACG
2265	GTCGTTTGTCTGGGCATTAACGGC	GCCGTTAATGCCCAGACAAACGAC
2266	CAGGCTCTCGTTCGGTACAAACGT	ACGTTTGTACCGAACGAGAGCCTG
2267	CGGACACTGTTTCACCAGAACCCA	TGGGTTCTGGTGAAACAGTGTCCG
2268	TACCCATGATGCGGAAGAAGCGTA	TACGCTTCTTCCGCATCATGGGTA
2269	CTGTCCTTAAGCGGATGAGAACCG	CGGTTCTCATCCGCTTAAGGACAG
2270	CGGGAGATGAGAACGGTTTTGTGC	GCACAAAACCGTTCTCATCTCCCG
2271	TAGATCGCGACTGTACTCAGGCCG	CGGCCTGAGTACAGTCGCGATCTA
2272	TAAAACAGTTCGCGCGACTGTCGT	ACGACAGTCGCGCGAACTGTTTTA
2273	CGAGGAGCTCCACATAAGCCCAAT	ATTGGGCTTATGTGGAGCTCCTCG
2274	TGGCTAGGGATGGGGAATCATCTT	AAGATGATTCCCCATCCCTAGCCA
2275	AGGATTGGGTGCCTGGATGCATTG	CAATGCATCCAGGCACCCAATCCT
2276	TGTATCTACCGGCCTGAAGCAGGT	ACCTGCTTCAGGCCGGTAGATACA

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2277	TCCCTACGCGCATGACTCGCTTAC	GTAAGCGAGTCATGCGCGTAGGGA
2278	TGGTCGATCACCTGTGACAGACGC	GCGTCTGTCACAGGTGATCGACCA
2279	TGGGGGTAGTCCATGCATCAATTG	CAATTGATGCATGGACTACCCCCA
2280	CCCTGCCAGGATTACTATTCCGGA	TCCGGAATAGTAATCCTGGCAGGG
2281	TCCCGCACGGGGAATTTAAGTAGA	TCTACTTAAATTCCCCGTGCGGGA
2282	GTGATGTGCAGGAACTTCTGTCGC	GCGACAGAAGTTCCTGCACATCAC
2283	ATTTAGGCATGCATGCGCTTCTCA	TGAGAAGCGCATGCATGCCTAAAT
2284	TTCGGCGCTAGTGGACGCCGTCAA	TTGACGGCGTCCACTAGCGCCGAA
2285	GAGCTTCATCTCATCAGTTCCGCG	CGCGGAACTGATGAGATGAAGCTC
2286	GACAACTCCACTGCTCCAATCGCA	TGCGATTGGAGCAGTGGAGTTGTC
2287	GGCCAAGGATGGACCTTACGATGG	CCATCGTAAGGTCCATCCTTGGCC
2288	GGTTCCGGAATTTGTCACCGCTTC	GAAGCGGTGACAAATTCCGGAACC
2289	GCGCTGGATAGTCTGCGAGAAGCC	GGCTTCTCGCAGACTATCCAGCGC
2290	TGAGTCCAGTGCTGCCACCATGAA	TTCATGGTGGCAGCACTGGACTCA
2291	TTGAATTGGGTGTCGGAGCGTTCT	AGAACGCTCCGACACCCAATTCAA
2292	CGGCGGGCAGACAATGCTTTGAAC	GTTCAAAGCATTGTCTGCCCGCCG
2293	GGGTCTGTCAAAGAGGGTGTCTGG	CCAGACACCCTCTTTGACAGACCC
2294	CTTTGTGCAAGACGAAGCACCCTT	AAGGGTGCTTCGTCTTGCACAAAG
2295	ATCGAATTCCGAGGAGGTCTCCAT	ATGGAGACCTCCTCGGAATTCGAT
2296	TCCGACCCTCAGAGTCGACTCATT	AATGAGTCGACTCTGAGGGTCGGA
2297	ATCAACGGCCACCTCCTCGCCGAG	CTCGGCGAGGAGGTGGCCGTTGAT
2298	AGCCACGGAATAATTCCGTCCACC	GGTGGACGGAATTATTCCGTGGCT
2299	GATCGCTTGCGTATCGCAAAGACT	AGTCTTTGCGATACGCAAGCGATC
2300	TCCACGCCTTACCATCAACTGCAA	TTGCAGTTGATGGTAAGGCGTGGA
2301	GCCAAGCGATAGGCCAGAACTCAG	CTGAGTTCTGGCCTATCGCTTGGC
2302	AGCGTGTGGGTCATTTTAGCACGA	TCGTGCTAAAATGACCCACACGCT
2303	GTTATGCGCGGCTTACGAGTTCGA	TCGAACTCGTAAGCCGCGCATAAC
2304	TCTGTCCACGTAACTTGCCTGCAG	CTGCAGGCAAGTTACGTGGACAGA
2305	TCGGCAGCCAATGATCATACCTCT	AGAGGTATGATCATTGGCTGCCGA
2306	TAAGCCCGATCCGGTCCTGTGTTT	AAACACAGGACCGGATCGGGCTTA
2307	ACATGGCAGACTAACAGGCCTCGC	GCGAGGCCTGTTAGTCTGCCATGT
2308	CATGGCTGCACTCTAAGTCGAACG	CGTTCGACTTAGAGTGCAGCCATG
2309	TCTTCAACCCACGCGGAACGATTG	CAATCGTTCCGCGTGGGTTGAAGA
2310	CTCGTGTCTCCAGAGGATTGTCCC	GGGACAATCCTCTGGAGACACGAG
2311	TGAAGGCATCAACCCAGAGGATTT	AAATCCTCTGGGTTGATGCCTTCA
2312	ACAGCTCGAAGGCAGCCACATTGG	CCAATGTGGCTGCCTTCGAGCTGT
2313	ACAACGAGTACCGCGACAGAAGGG	CCCTTCTGTCGCGGTACTCGTTGT
2314	ATAACCGAAAAACCAGCCTGCGAT	ATCGCAGGCTGGTTTTTCGGTTAT
2315	ACAACTCAGCACTTTCGACGTCCA	TGGACGTCGAAAGTGCTGAGTTGT
2316	CGGGTTACTGGGTATCACCAATGC	GCATTGGTGATACCCAGTAACCCG
2317	CATCGGTTATCGCTGCACGCGCGT	ACGCGCGTGCAGCGATAACCGATG
2318	GAAGGAATCCCGGATAGTCCGTGG	CCACGGACTATCCGGGATTCCTTC
2319	GCATGGTCTCAGCCAAAGAACCTG	CAGGTTCTTTGGCTGAGACCATGC
2320	AGCCTGCGACGTTTCCCGACAGAC	GTCTGTCGGGAAACGTCGCAGGCT
2321	AAGAAAGGCGCACGGGATCGATAT	ATATCGATCCCGTGCGCCTTTCTT
2322	TGTCGCGAAGCCAACTTTCAGTAA	TTACTGAAAGTTGGCTTCGCGACA
2323	GCGGCATGCAAGGTAGGTCTGGAT	ATCCAGACCTACCTTGCATGCCGC
2324	GGTGGCCATCTCCTCGAATTGCAT	ATGCAATTCGAGGAGATGGCCACC
2325	GCGTGCATAAGTTGCACATTGTGC	GCACAATGTGCAACTTATGCACGC
2326	TTGAGGTAGCGTTTTCGCGCATAT	ATATGCGCGAAAACGCTACCTCAA
2327	ATCCCACTTGTGAGAGGGCGCATT	AATGCGCCCTCTCACAAGTGGGAT
2328	CGGTCAGCGAGCAGACATCAACCT	AGGTTGATGTCTGCTCGCTGACCG
2329	GCGTATCTTCGGGTCGAACACTTG	CAAGTGTTCGACCCGAAGATACGC
2330	ATGCCATTGAACTCGCACTTTGCG	CGCAAAGTGCGAGTTCAATGGCAT
2331	CGATTCCCATCATAATGTGGGTCC	GGACCCACATTATGATGGGAATCG
2332	CAATTTGGATAATCCAGCCACGCC	GGCGTGGCTGGATTATCCAAATTG
2333	CGGCTTACCCTATGATTGCGTGCA	TGCACGGAATCATAGGGTAAGCCG
2334	GGTGGACCATGCGCTGTGGTATGA	TCATACCACAGCGCATGGTCCACC
2335	TATTTGTCGAAGATCGCAAGCGCC	GGCGCTTGCGATCTTCGACAAATA
2336	GTCAGTGGGTTTTGAGAGCCCGCA	TGCGGGCTCTCAAAACCCACTGAC
2337	AGGGGGTCGGGAAATCTGACAAAA	TTTTGTCAGATTTCCCGACCCCCT
2338	TGCTTGCTATCCGAAAAAAGCAGG	CCTGCTTTTTTCGGATAGCAAGCA
2339	TTATCGGATCAAATTCGGCTTCGG	CCGAAGCCGAATTTGATCCGATAA
2340	TGCAGCAACGAGTTACCCGGACTT	AAGTCCGGGTAACTCGTTGCTGCA
2341	TATACATGTCCGGAGGGGCACCCA	TGGGTGCCCCTCCGGACATGTATA
2342	TGCAAAACCGGAGGATGAACCCTT	AAGGGTTCATCCTCCGGTTTTGCA
2343	TCGGTCTAATGTCCACGCAGACAC	GTGTCTGCGTGGACATTAGACCGA
2344	ATGTGTTTGCCACGCGCTCCTATT	AATAGGAGCGCGTGGCAAACACAT
2345	TGGCGAGGCACGGCTCTAATTCGG	CCGAATTAGAGCCGTGCCTCGCCA
2346	GCGACGACCCGAGCGACTTTTACA	TGTAAAAGTCGCTCGGGTCGTCGC
2347	CTCAGAGAGTCTATCCGGCGCCCT	AGGGCGCCGGATAGACTCTCTGAG
2348	GGAACATCTCCTGGGTCCCTCAGA	TCTGAGGGACCCAGGAGATGTTCC
2349	GCAACGCAGGGAAGTACTTAGCGA	TCGCTAAGTACTTCCCTGCGTTGC
2350	TGACTTGGGCGGACAAAGAAACGC	GCGTTTCTTTGTCCGCCCAAGTCA

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2351	AGATCATCGGGACGCTTCATGCTA	TAGCATGAAGCGTCCCGATGATCT
2352	CCCTTCTGACCGCTAAGGCCATAA	TTATGGCCTTAGCGGTCAGAAGGG
2353	CGTGAGCCGTGGGGTGTCTCTGTA	TACAGAGACACCCCACGGCTCACG
2354	TACCTTGGTCGTCTCCGCTTTTGT	ACAAAAGCGGAGACGACCAAGGTA
2355	TCGCCGCAAAATGCTACGTGAAAA	TTTTCACGTAGCATTTTGCGGCGA
2356	GAGTGACCTAATGGCTGCCCGACT	AGTCGGGCAGCCATTAGGTCACTC
2357	AAAGGAACTTGGCCAACCCTATGG	CCATAGGGTTGGCCAAGTTCCTTT
2358	TGTTTTCGCACTCCACCTAATCGC	GCGATTAGGTGGAGTGCGAAAACA
2359	CAATGGGTTTCATAAGGGCAGGCA	TGCCTGCCCTTATGAAACCCATTG
2360	GCCTAACACACAAGGGTCCCTCTG	CAGAGGGACCCTTGTGTGTTAGGC
2361	CGTCATGCGGTCCGAGGATCGATC	GATCGATCCTCGGACCGCATGACG
2362	CCACACGGGCACGGAGTAATATCT	AGATATTACTCCGTGCCCGTGTGG
2363	CATCAGACATAGGTCGCGTGCCGA	TCGGCACGCGACCTATGTCTGATG
2364	AGATGAAACCAAGGGAGGACGCAG	CTGCGTCCTCCCTTGGTTTCATCT
2365	GGCTACCCATAGGCTCAGCAGCAC	GTGCTGCTGAGCCTATGGGTAGCC
2366	GGCTTGTGAGGGTGTGTTCTCGAC	GTCGAGAACACACCCTCACAAGCC
2367	TGTGTTACGGCGAATGCAACAGTC	GACTGTTGCATTCGCCGTAACACA
2368	CGATAACAGGTCGCGCCGTTACTA	TAGTAACGGCGCGACCTGTTATCG
2369	TGATAAAGTGAGGCTCCAGCGCGA	TCGCGCTGGAGCCTCACTTTATCA
2370	AATTGTGCACGGATCTGCACGGCG	CGCCGTGCAGATCCGTGCACAATT
2371	GCAATGTACTGTCACCAGTGGCGA	TCGCCACTGGTGACAGTACATTGC
2372	GGCATATCGGTAACACTTGGTCGG	CCGACCAAGTGTTACCGATATGCC
2373	GGGTCTCAAACCAGCGTGGCCGCT	AGCGGCCACGCTGGTTTGAGACCC
2374	GTCTCCGGGACCATTGAGCTGGAG	CTCCAGCTCAATGGTCCCGGAGAC
2375	GGCCTTCGGCATTCAGACGGGTTG	CAACCCGTCTGAATGCCGAAGGCC
2376	CGTGATAGGCCACAGCGCTCAATT	AATTGAGCGCTGTGGCCTATCACG
2377	GGCAGGCCCGCGAGGATGATTAAC	GTTAATCATCCTCGCGGGCCTGCC
2378	CGGGTATGGTTGATAACAGCGTGG	CCACGCTGTTATCAACCATACCCG
2379	ACGACGTCCTTGGGACCGTATTGT	ACAATACGGTCCCAAGGACGTCGT
2380	CTGATATCGAGCCTGAGCCTTTCG	CGAAAGGCTCAGGCTCGATATCAG
2381	TCCCATTGGCCTGTATGCTGGCCT	AGGCCAGCATACAGGCCAATGGGA
2382	GTGTCGTCGATTGTTTCATCGACG	CGTCGATGAAACAATCGACGACAC
2383	CGAAAGCCAGTAGCCGATTGCGTG	CACGCAATCGGCTACTGGCTTTCG
2384	GGTTCGGCTTATTCCACTGCGACA	TGTCGCAGTGGAATAAGCCGAACC
2385	AGCGAGGGCTAACTTTTTAACGCG	CGCGTTAAAAAGTTAGCCCTCGCT
2386	CGGCGCTGATGACGGGACTCGATT	AATCGAGTCCCGTCATCAGCGCCG
2387	TCACAGTGCTCGGCGTAAGGACTA	TAGTCCTTACGCCGAGCACTGTGA
2388	CCCATTACGAGCACACACCATGGC	GCCATGGTGTGTGCTCGTAATGGG
2389	GGCCGCTAATCTTTACGCATCACG	CGTGATGCGTAAAGATTAGCGGCC
2390	ACGGCTTCCTAGTGTCCAGCCCTT	AAGGGCTGGACACTAGGAAGCCGT
2391	CTGTCAGGTCCTACCCAATGGCTC	GAGCCATTGGGTAGGACCTGACAG
2392	CACAGCCCATCCCACTGAACTGCT	AGCAGTTCAGTGGGATGGGCTGTG
2393	ACAAACGATACACGCAACGCTGTG	CACAGCGTTGCGTGTATCGTTTGT
2394	TGGCGGCCAGCTAGCAGGCGAAGT	ACTTCGCCTGCTAGCTGGCCGCCA
2395	ATCTCGAAACGATGCGTGCCTAAA	TTTAGGCACGCATCGTTTCGAGAT
2396	ATCTCGAGAACAGCGTGCGTGCGG	CCGCACGCACGCTGTTCTCGAGAT
2397	GAAGAAATCCGCCGACATCTACGG	CCGTAGATGTCGGCGGATTTCTTC
2398	GCGGAGCAACCTTGGCTGTTTCTA	TAGAAACAGCCAAGGTTGCTCCGC
2399	CGCGTTCCGAAGACTTGTTGTTTG	CAAACAACAAGTCTTCGGAACGCG
2400	TGACCTGAAGCCCATCCATAAGCA	TGCTTATGGATGGGCTTCAGGTCA
2401	TGGTATTCATTCCGGATAAGCGGG	CCCGCTTATCCGGAATGAATACCA
2402	GCGTTGCGGGTCATTGATGCAAAC	GTTTGCATCAATGACCCGCAACGC
2403	ACCGCTTTCTGTGTAGAGCCCTGA	TCAGGGCTCTACACAGAATGCGGT
2404	CAAATAGACAATCGCAGCTTCGGG	CCCGAAGCTGCGATTGTCTATTTG
2405	TGTCCTGACAAATCAAGGTGCAGG	CCTGCACCTTGATTTGTCAGGACA
2406	AAATTGCACTCGCGGAGATTTCCT	AGGAAATCTCCGCGAGTGCAATTT
2407	TGACGCCCATTTCTATATGGTGCA	TGCACCATATAGAAATGGGCGTCA
2408	TGTTCCGACAGGGCACTGCTAGAC	GTCTAGCAGTGCCCTGTCGGAACA
2409	TCGCTGGCTTGGGAAGGCCTTCGT	ACGAAGGCCTTCCCAAGCCAGCGA
2410	GTGCACCTCCGTTGGCGTAGAATG	CATTCTACGCCAACGGAGGTGCAC
2411	CTCATTTGGGACCGATCGGGTTGC	GCAACCCGATCGGTCCCAAATGAG
2412	GCCAGTGTCTGTCAATGGATGGGA	TCCCATCCATTGACAGACACTGGC
2413	TTGCCCGGCAGGTTCTGTGTAATG	CATTACACAGAACCTGCCGGGCAA
2414	ACCCGCGAACCGAGACGCACTTCT	AGAAGTGCGTCTCGGTTCGCGGGT
2415	TCCGTGCGATTGGTCAAGGTTGAT	ATCAACCTTGACCAATCGCACGGA
2416	AGGGCGTCTCGGTTGAACCTCGGT	ACCGAGGTTCAACCGAGACGCCCT
2417	TGACCGTTCAAAGAGCAAGCCAAC	GTTGGCTTGCTCTTTGAACGGTCA
2418	ACACTCACCTGCTGTCCCTGCTGA	TCAGCAGGGACAGCAGGTGAGTGT
2419	GCGTTTAACTCCTTGGGTGGTGGT	ACCACCACCCAAGGAGTTAAACGC
2420	CGCCTGCGCAGGTAACTCTCCGCA	TGCGGAGAGTTACCTGCGCAGGCG
2421	AATCGAATTTCCCAGCGGCTGTTT	AAACAGCCGCTGGGAAATTCGATT
2422	AAGCAGGTGGGATCCTGGGGATCA	TGATCCCCAGGATCCCACCTGCTT
2423	AATCCCAGACTCGCTCTTCGTGCT	AGCACGAAGAGCGAGTCTGGGATT
2424	ACGGTTATAAGGGCCGGCTGCGAC	GTCGCAGCCGGCCCTTATAACCGT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2425	TACGAGAGCGGGCTTAGACGTCGC	GCGACGTCTAAGCCCGCTCTCGTA
2426	GCGATTTTGACCCACGGTTATCGA	TCGATAACCGTGGGTCAAAATCGC
2427	AGCTGTATAATTTGGATGGCGCGA	TCGCGCCATCCAAATTATACAGCT
2428	TCCGCGAGTCTTAGCCGATTGAAC	GTTCAATCGGCTAAGACTCGCGGA
2429	GGCATGAGCTCCGTAAGCCGATAG	CTATCGGCTTACGGAGCTGATGCC
2430	TGTTATTGGCAGTTCGAGCGACAG	CTGTCGCTCGAACTGCCAATAACA
2431	GCGAGCCTTTTTGCTTGGGAAGAG	CTCTTCCCAAGCAAAAAGGCTCGC
2432	AGAAGAAAAGGTCAGCGTCGACGA	TCGTCGACGCTGACCTTTTCTTCT
2433	CGGGTCGACCCTTGAAGCATAACC	GGTTATGCTTCAAGGGTCGACCCG
2434	CTCGGTTTTCACAAACTTACCGCG	CGCGGTAAGTTTGTGAAAACCGAG
2435	GCAGTCCTATCCGGAGCCTGACAA	TTGTCAGGCTCCGGATAGGACTGC
2436	AAGGTGCGCTATTTGTTGTCGGTC	GACCGACAACAAATAGCGCACCTT
2437	AGTGGAATCCATGCCGACACCTGA	TCAGGTGTCGGCATGGATTCCACT
2438	TACAGGCGTAATTCCTGCGAGGGA	TCCCTCGCAGGAATTACGCCTGTA
2439	CCGAAGTGCGAGAAGCACGTTGTT	AACAACGTGCTTCTCGCACTTCGG
2440	AAGGACTGGTATGGCCGGAGCTTT	AAAGCTCCGGCCATACCAGTCCTT
2441	GGACACCGCCAACCTCATAGTTGC	GCAACTATGAGGTTGGCGGTGTCC
2442	AATGGTGTTCGCCTGGACTACCAC	GTGGTAGTCCAGGCGAACACCATT
2443	TAGGAAAGCGTACACGGGAATCCG	CGGATTCCCGTGTACGCTTTCCTA
2444	TCTCACCCCAATGATGAGGACGTC	GACGTCCTCATCATTGGGGTGAGA
2445	CGTGTCCGTGTGACACTGTCCATG	CATGGACAGTGTCACACGGACACG
2446	TCCAGGCTGTTGCGGATACGGTAG	CTACCGTATCCGCAACAGCCTGGA
2447	GTAGGCAAAATGGTCGCGATCAAT	ATTGATCGCGACCATTTTGGCTAC
2448	ATCTCCGTGGACCCGATTGTGACA	TGTCACAATGGGGTCCACGGAGAT
2449	GAATATGCCGTCAACGCTATGGGC	GCCCATAGCGTTGACGGCATATTC
2450	TTCCGGAAGCGTTTGGTAACTTTG	CAAAGTTACCAAACGCTTCCGGAA
2451	TTCGATAGGAATACCAGGGCCTGG	CCAGGCCCTGGTATTCCTATCGAA
2452	GGCCATTTGAGGAGGATTATGCAA	TTGCATAATCCTCCTCAAATGGCC
2453	ACCTTCTGACCTGGACTTTTGGCG	CGCCAAAAGTCCAGGTCAGAAGGT
2454	GACCAATCCGCAGTTGAGCAACAG	CTGTTGCTCAACTGCGGATTGGTC
2455	TCGGCCACTCACCATGAGTGTAGG	CCTACACTCATGGTGAGTGGCCGA
2456	AGCGCTCACATGTTCGAAAACGGG	CCCGTTTTCGAACATGTGAGCGCT
2457	TAACGCAAAGGCGCGATCCTCGCT	AGCGAGGATCGCGCCTTTGCGTTA
2458	TGGGTGGGCCAAATATTACTGCAA	TTGCAGTAATATTTGGCCCACCCA
2459	GTCCTCGAAAGGGGCATCCAAACA	TGTTTGGATGCCCCTTTCGAGGAC
2460	CCCATCTGGTGGGAGGCGTTATCA	TGATAACGCCTCCCACCAGATGGG
2461	GTGCGCGGTCTGCAAACTCGCCAT	ATGGCGAGTTTGCAGACCGCGCAC
2462	TGTGTTGCCAACCCTAGGTCATCA	TGATGACCTAGGGTTGGCAACACA
2463	CTGATGCTGTTCTCGTCGGTTGAC	GTCAACCGACGAGAACAGCATCAG
2464	AAGCTGCAAAAGGTGAGCGTGGCA	TGCCACGCTCACCTTTTGCAGCTT
2465	TCTGACGCGTGCTTGGGAGTCTAT	ATAGACTCCCAAGCACGCGTCAGA
2466	GAATTACTTGGAGGCGCCGTGCAA	TTGCACGGCGCCTCCAAGTAATTC
2467	GATTCTTCCCGACCTAGGTTGGCC	GGCCAACCTAGGTCGGGAAGAATC
2468	CGCAGCGTATCCCATGTTGCTTGA	TCAAGCAACATGGGATACGCTGCG
2469	GAGATGGAATTGTTCGCCCAAAGA	TCTTTGGGCGAACAATTCCATCTC
2470	GATGCCTGGATCGGTCTAGCGTCA	TGACGCTAGACCGATCCAGGCATC
2471	GCAGCGACTGCTAAGCTATCTCGG	CCGAGATAGCTTAGCAGTCGCTGC
2472	AGGGCTAATTTACATCGCCTTGCC	GGCAAGGCGATGTAAATTAGCCCT
2473	AAGTGCACATCCTCACGAAGCGAT	ATCGCTTCGTGAGGATGTGCACTT
2474	TCAGGCAGCCGTAATTAAATGCGC	GCGCATTTAATTACGGCTGCCTGA
2475	CCACTGGGGAAATCGCACTGTTGG	CCAACAGTGCGATTTCCCCAGTGG
2476	TTGTCCAAAGCCACCTACGACAGA	TCTGTCGTAGGTGGCTTTGGACAA
2477	TGGGCGGAATAGATTGGGTGTCTT	AAGACACCCAATCTATTCCGCCCA
2478	TAGAATTCGCCTCTTCTAGCCGCC	GGCGGCTAGAAGAGGCGAATTCTA
2479	CATTACTTCCTGCAGATGCGATGC	GCATCGCATCTGCAGGAAGTAATG
2480	GGAAATGCTAGCTGGGGTAATCGC	GCGATTACCCCAGCTAGCATTTCC
2481	GCCGCCACTTGCGAATCTACATCT	AGATGTAGATTCGCAAGTGGCGGC
2482	ACAATAGCGGACAGCTCGCCAGAT	ATCTGGCGAGCTGTCCGCTATTGT
2483	AGTTAGGCTCTCGGTGCGGTCCAT	ATGGACCGCACCGAGAGCCTAACT
2484	TGGGCCTGAGAAGCGGTTAATAGG	CCTATTAACCGCTTCTCAGGCCCA
2485	ACGCTCTGAGCGACGCCTATCGTA	TACGATAGGCGTCGCTCAGAGCGT
2486	CCTGGTGATCGTGTCCCAGACTCA	TGAGTCTGGGACACGATCACCAGG
2487	GCGTGTCCATTCGCTTGAGGTTTC	GAAACCTCAAGCGAATGGACACGC
2488	ATCCTGAACGGCGATGACCACCAC	GTGGTGGTCATCGCCGTTCAGGAT
2489	TTACGTTTCTCACCGATCAACGCC	GGCGTTGATCGGTGAGAAACGTAA
2490	GCCGTCTTGAGTGGCTAAAAGGCA	TGCCTTTTAGCCACTCAAGACGGC
2491	ATCTACGATGCGGCTCGAAGTGTT	AACACTTCGAGCCGCATCGTAGAT
2492	AACCAAGACTCGTCCCCAAACGTT	AACGTTTGGGGACGAGTCTTGGTT
2493	AACTGCGGTGGTGGAGGCAGGTGC	GCACCTGCCTCCACCACCGCAGTT
2494	TGCGATCTTCTCCACCTACAGCGC	GCGCTGTAGGTGGAGAAGATCGCA
2495	AGGCGCTTAGAACCGTGAAGGCAG	CTGCCTTCACGGTTCTAAGCGCCT
2496	TGGAAAATTTTGGGAAACGCTGGA	TCCAGCGTTTCCCAAAATTTTCCA
2497	CCAGCGCCGCACCTTCTCCAATAG	CTATTGGAGAAGGTGCGGCGCTGG
2498	TAGACGGCTGGCGAATCTTACGGT	ACCGTAAGATTCGCCAGCCGTCTA

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2499	TACCATACAAGAGAACGAGCCGCA	TGCGGCTCGTTCTCTTGTATGGTA
2500	GTAGCCGAGAGCAATTTTCACCGC	GCGGTGAAAATTGCTCTCGGCTAC
2501	GCAAACTCCCCTGCCCTTTAGCCT	AGGCTAAAGGGCAGGGGAGTTTGC
2502	ATCCCGCTGATAACCGCCAGGATA	TATCCTGGCGGTTATCAGCGGGAT
2503	AGTCTCAGTTCGGCGCAACGGTAG	CTACCGTTGCGCCGAACTGAGACT
2504	AACCTACAGTCGCCGCAATGCATT	AATGCATTGCGGCGACTGTAGGTT
2505	ATACACGTTTCAGCCGGCAACAAT	ATTGTTGCCGGCTGAAACGTGTAT
2506	ACGACGGGACGTGCCCTCGTTGAT	ATCAACGAGGGCACGTCCCGTCGT
2507	AAGTCCAAACTCGAATGGGGCAGT	ACTGCCCCATTCGAGTTTGGACTT
2508	GATTTATTGGCGCGGTAACGACCT	AGGTCGTTACCGCGCCAATAAATC
2509	TGTTTTCAGAGGCTACCCTGCCAT	ATGGCAGGGTAGCCTCTGAAAACA
2510	ACGGTCTCAGGGAAATGCGATCTC	GAGATCGCATTTCCCTGAGACCGT
2511	GACTTGAAACCGCCTATGCCCACA	TGTGGGCATAGGCGGTTTCAAGTC
2512	CGATCGGTTGTGTGCTGTCTTACC	GGTAAGACAGCACACAACCGATCG
2513	AGTAGCACAATGCCTCATTTCCGC	GCGGAAATGAGGCATTGTGCTACT
2514	CTCGCTATCTACGCGTCTCCGAAA	TTTCGGAGACGCGTAGATAGCGAG
2515	AGCCCGTTACGGCATCTAGGATTC	GAATCCTAGATGCCGTAACGGGCT
2516	TCGCGATGGCGAGAGTTCAGAATA	TATTCTGAACTCTCGCCATCGCGA
2517	TTACAGGATTCCAAAACCCGCAAA	TTTGCGGGTTTTGGAATCCTGTAA
2518	CGGTACCAACGCGCGGGCATATGA	TCATATGCCCGCGCGTTGGTACCG
2519	TGCCAGTATTATCCGTGCCAGCCG	CGGCTGGCACGGATAATACTGGCA
2520	ATTTCAGACCTCGGGACAACCTGG	CCAGGTTGTCCCGAGGTCTGAAAT
2521	GAAGTGCGCGTAACTTAGGGAGCC	GGCTCCCTAAGTTACGCGCACTTC
2522	TTGGCCAGGTCATCACTCTGCCAT	ATGGCAGAGTGATGACCTGGCCAA
2523	ATCGGCCGGTATTAGCTGCCCTCC	GGAGGGCAGCTAATACCGGCCGAT
2524	CGCAGGTAAGGCCGAGCAATGTTT	AAACATTGCTCGGCCTTACCTGCG
2525	TTGGGAACGTGCTAGGCGGCCCTC	GAGGGCCGCCTAGCACGTTCCCAA
2526	CATCTCGGCACACTGGTGCTGTAT	ATACAGCACCAGTGTGCCGAGATG
2527	ACGCGTAAATCAACGACGTGGTCG	CGACCACGTCGTTGATTTACGCGT
2528	CGTAGGTGGTAAATGTTGGCCCAG	CTGGGCCAACATTTACCACCTACG
2529	TTCGAGCCAGAATAAAACGGTTGG	CCAACCGTTTTATTCTGGCTCGAA
2530	AGAGATATTCGGCCTCGGTCGAGA	TCTCGACCGAGGCCGAATATCTCT
2531	CGACAAAGTTTCTCGCGAGCAACT	AGTTGCTCGCGAGAAACTTTGTCG
2532	ATTGCCGCGTCTCGTATCAAAAGA	TCTTTTGATACGAGACGCGGCAAT
2533	CGGAGAATGGATGCAGGTTCTTCG	CGAAGAACCTGCATCCATTCTCCG
2534	TATAATCATTTGCGACTCGCCCCA	TGGGGCGAGTCGCAAATGATTATA
2535	AATTTTCCCCGATTTGAAGAAGCG	CGCTTCTTCAAATCGGGGAAAATT
2536	TCGCATACTTCGTCGGCGAGTATT	AATACTCGCCGACGAAGTATGCGA
2537	CGTGAGCCGTTCTCATCCAAGCGG	CCGCTTGGATGAGAACGGCTCACG
2538	GCAGAATCGAATTGGGGTGGGTTT	AAACCCACCCCAATTCGATTCTGC
2539	CTCTCGGTTTCTCAACCGAGCTCG	CGAGCTCGGTTGAGAAACCGAGAG
2540	GACCAGTTAGTGCAATGGTTGGCG	CGCCAACCATTGCACTAACTGGTC
2541	TTCTCGCACAGCTAGTCAGCCGAT	ATCGGCTGACTAGCTGTGCGAGAA
2542	CCAAGTCTTGCGTGAGCGATCCTG	CAGGATCGCTCACGCAAGACTTGG
2543	GCGAAAGTGGCTCGTATTTCTCCA	TGGAGAAATACGAGCCACTTTCGC
2544	CCTCGGGACTGTCCGACTGAAAAA	TTTTTCAGTCGGACAGTCCCGAGG
2545	AGGCGAGTGTACGGCTCATCCATG	CATGGATGAGCCGTACACTCGCCT
2546	GCGGCTCTGCCTACGATATTCACA	TGTGAATATCGTAGGCAGAGCCGC
2547	TGCACCTGTCTGTAGATTTGCGGT	ACCGCAAATCTACAGACAGGTGCA
2548	CATAAAGCACGGACGCGACTTGAT	ATCAAGTCGCGTCCGTGCTTTATG
2549	CCCTCAACGTAGGGCGTGACTTTC	GAAAGTCACGCCCTACGTTGAGGG
2550	GGGTCATCGTGCAGTTATGCCGTA	TACGGCATAACTGCACGATGACCC
2551	CCCGGATAATCCTTTGTCCAGCCG	CGGCTGGACAAAGGATTATCCGGG
2552	TCCGATAAGCGAACTCACATGGGT	ACCCATGTGAGTTCGCTTATCGGA
2553	CCTGCTGGTTCGGTCGTAAGCGAA	TTCGCTTACGACCGAACCAGCAGG
2554	GAGGCACCAATCGGTCTGAAAATG	CATTTTCAGACCGATTGGTGCCTC
2555	TACGAAAATGGTTGCGCCGGGTCT	AGACCCGGCGCAACCATTTTCGTA
2556	AATTGCCGGAAGCAGTCAGAATCG	CGATTCTGACTGCTTCCGGCAATT
2557	CCGAATCAGCCGTATTTGCTGGAA	TTCCAGCAAATACGGCTGATTCGG
2558	CCCGCTTATCTGTACTCGATCGCA	TGCGATCGAGTACAGATAAGCGGG
2559	TTTTGGGGATCCCTATTAGGCGCA	TGCGCCTAATAGGGATCCCCAAAA
2560	AGTGACAGCGCTCACCACGGTCCC	GGGACCGTGGTGAGCGCTGTCACT
2561	CCATGAGTGTTTCGGGACATCGTA	TACGATGTCCCGAAACACTCATGG
2562	GCCACATTCTGCTACCTCCGTGTT	AACACGGAGGTAGCAGAATGTGGC
2563	TCCTGTGCTTTGTGACGTGCTAGG	CCTAGCACGTCACAAAGCACAGGA
2564	GACCGCATATACACCTGATGGGCC	GGCCCATCAGGTGTATATGCGGTC
2565	GTAGGCCCGTCGTTAACCATCTCA	TGAGATGGTTAACGACGGGCCTAC
2566	CGGCTCGCGAAATGGAGTTTAGCG	CGCTAAACTCCATTTCGCGAGCCG
2567	GCTGATCGGCTTTTCACCGCTATA	TATAGCGGTGAAAAGCCGATCAGC
2568	TATCAAATCGTTGGCACGCGACTA	TAGTCGCGTGCCAACGATTTGATA
2569	TTGGCGAGGATCCCTAGGCGTACT	AGTACGCCTAGGGATCCTCGCCAA
2570	AAGTCCTGAGGCCGTTCGGTTTCT	AGAAACCGAACGGCCTCAGGACTT
2571	ACTCCGGACATCTCGGCCAGAGAT	ATCTCTGGCCGAGATGTCCGGAGT
2572	CCAAGGGGAACACAGGATCGTAGA	TCTACGATCCTGTGTTCCCCTTGG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2573	GTGGCCTAAATCCGCCTTCTCAAC	GTTGAGAAGGCGGATTTAGGCCAC
2574	CACTCCGTCTCGTCCATTAATGCG	CGCATTAATGGACGAGACGGAGTG
2575	TCAAGAACCCAGTGCCGGTCAGCA	TGCTGACCGGCACTGGGTTCTTGA
2576	GAATCAATTTTCCAGGGACGGGAC	GTCCCGTCCCTGGAAAATTGATTC
2577	ATCGGTGTGCTGGAGCGCCAGAGT	ACTCTGGCGCTCCAGCACACCGAT
2578	GCCTCTCCTATGACGATGACCCAC	GTGGGTCATCGTCATAGGAGAGGC
2579	TGGGCGCGCTTTTAAGACTACATC	GATGTAGTCTTAAAAGCGCGCCCA
2580	CGTTGGGTACCGTTCTATCAACCG	CGGTTGATAGAACGGTACCCAACG
2581	GCAGTGAGCTGGGTTCAATGCTTC	GAAGCATTGAACCCAGCTCACTGC
2582	CATCATCCACACAGGCAGGTGTGT	ACACACCTGCCTGTGTGGATGATG
2583	AGACAAAGGTCCCCATTGCGAAAT	ATTTCGCAATGGGGACCTTTGTCT
2584	ATACTCGTCGACGAGAAGCGGAAA	TTTCCGCTTCTCGTCGACGAGTAT
2585	GCAGAATGTGTTGTCTTCGCAGCC	GGCTGCGAAGACAACACATTCTGC
2586	CACCATGCCTTCATCTTGGCCTAG	CTAGGCCAAGATGAAGGCATGGTG
2587	ACTCTTCAACGCCAGGTTAAGCCA	TGGCTTAACCTGGCGTTGAAGAGT
2588	GCGACCTGCGGCGTGTGTATTCTC	GAGAATACACACGCCGCAGGTCGC
2589	TCGGTGTATGCACCCTTTCTCCAT	ATGGAGAAAGGGTGCATACACCGA
2590	ACCGTCGAATCTTGCGGCCAATGT	ACATTGGCCGCAAGATTCGACGGT
2591	TAATGCATGCTCCCGGCTCACGTT	AACGTGAGCCGGGAGCATGCATTA
2592	TCTGTACACACCACGTCGTGCACA	TGTGCACGACGTGGTGTGTACAGA
2593	TATGGGGTTGTCAGACGACACCTA	TAGGTGTCGTCTGACAACCCCATG
2594	AATCTGATGCTCGCTGTAGGACGG	CCGTCCTACAGCGAGCATCAGATT
2595	TCGAAACCGCGGGAAAGGGTAAAA	TTTTACCCTTTCCCGCGGTTTCGA
2596	TGGGGGACGGGCGTCTAATCCTCC	GGAGGATTAGACGCCCGTCCCCCA
2597	AGGCATGCACCCATGCTGCCAGAG	CTCTGGCAGCATGGGTGCATGCCT
2598	TCCCAATGGCCTGTCAAGCATAAA	TTTATGCTTGACAGGCCATTGGGA
2599	GAACCTGAGCCTTTGCTAGCACGA	TCGTGCTAGCAAAGGCTCAGGTTC
2600	CGAATTGATAGCGTTACGGGCGAA	TTCGCCCGTAACGCTATCAATTCG
2601	TTGCACGCGCGCGAACGACTATTC	GAATAGTCGTTCGCGCGCGTGCAA
2602	TGCGGTGAAGCAGTCCAAGGTCAG	CTGACCTTGGACTGCTTCACCGCA
2603	TGAGGACCATCCAATGGATCGGTT	AACCGATCCATTGGATGGTCCTCA
2604	TCGGTGATTGGTAATTTGGATCCG	CGGATCCAAATTACCAATCACCGA
2605	GCGGGCAGGTAGTTTGACTGGATG	CATCCAGTCAAACTACCTGCCCGC
2606	CAAGCACAAGCCCATGAAATTTCA	TGAAATTTCATGGGCTTGTGCTTG
2607	CGGTACAGCGGATAGCCAAGGATA	TATCCTTGGCTATCCGCTGTACCG
2608	CCATGCTCTTCGCTGCAGCATACT	AGTATGCTGCAGCGAAGAGCATGG
2609	CGCGGCAAAGATTAATTCCCGGCG	CGCCGGGAATTAATCTTTGCCGCG
2610	GAAGACCCGTCCGGGTTTCCATAC	GTATGGAAACCCGGACGGGTCTTC
2611	CTGGCAAGGAGGATGTGGCTCGTG	CACGAGCCACATCCTCCTTGCCAG
2612	CTGTGCAGGGGGTGGCTCTGTTGA	TCAACAGAGCCACCCCCTGCACAG
2613	TTCAATAATGATCACGAGGCCCCA	TGGGGCCTCGTGATCATTATTGAA
2614	TGGTGATGCGAAGCCTTACCTTTG	CAAAGGTAAGGCTTCGCATCACCA
2615	CTGCCACCATCTACGGCGCAGTCT	AGACTGCGCCGTAGATGGTGGCAG
2616	TTTGCCCAGCTCTCGCAGAAGTTA	TAACTTCTGCGAGAGCTGGGCAAA
2617	AATTCAGACGCCACATCGACGGTC	GACCGTCGATGTGGCGTCTGAATT
2618	CCGTGGTCTGCCTCGATTACCTAC	GTAGGTAATCGAGGCAGACCACGG
2619	GGCGAGGAATTTCGGAACCTTATG	CATAAGGTTCCGAAATTCCTCGCC
2620	ATCCGATGATCAGATACCGGCTGG	CCAGCCGGTATCTGATCATCGGAT
2621	CCATAGACTAGCGCCAGAGTGCCC	GGGCACTCTGGCGCTAGTGTATGG
2622	TGTGGACCTAGAAAATTGCCAGCC	GGCTGGCAATTTTCTAGGTCCACA
2623	GAATAATCATCGCGGTCCTCATGG	CCATGAGGACCGCGATGATTATTC
2624	GGGATTGGCTCTTGGTTGGAAGAA	TTCTTCCAACCAAGAGCCAATCCC
2625	ATTGTGCTTCCTCGAACTGGGAAA	TTTCCCAGTTCGAGGAAGCACAAT
2626	TGCCCCACCCCGTAAGTCAATAAT	ATTATTGACTTACGGGGTGGGGCA
2627	TCAGGACCGACGGTGCACTTAGTG	CACTAAGTGCACCGTCGGTCCTGA
2628	CCAGCCGTCACAGTGCAATTTCCG	CGGAAATTGCACTGTGACGGCTGG
2629	CTTAAAGAGGCGCGAAGCACAACA	TGTTGTGCTTCGCGCCTCTTTAAG
2630	TACCGCTCGTCGCGATCACAATGA	TCATTGTGATCGCGACGAGCGGTA
2631	CCGAGTGCGCGAAGTGTCTATGTG	CACATAGACACTTCGCGCACTCGG
2632	GCACCAGTGCCCGATCAAAACGTA	TACGTTTTGATCGGGCACTGGTGC
2633	TGCAGGCTTCTCAACGGCTGGGAG	CTCCCAGCCGTTGAGAAGCCTGCA
2634	CTCCGTACGTATCCCGCGTGATAC	GTATCACGCGGGATACGTACGGAG
2635	GGAAGTGCAACTTAAAGCCCCGCC	GGCGGGGCTTTAAGTTGCACTTCC
2636	CGAACCGGCAGTCGATCGTTGCAT	ATGCAACGATCGACTGCCGGTTCG
2637	CCGTTAGTGGTCGACAGTTCGGTT	AACCGAACTGTCGACCACTAACGG
2638	TCAGGCTACGCCCTCAGCACTACA	TGTAGTGCTGAGGGCGTAGCCTGA
2639	TATACGGGCCGAGGTCCGTATTCG	CGAATACGGACCTCGGCCCGTATA
2640	CCAACGTGTGACGAAGGGCCATTG	CAATGGCCCTTCGTCACACGTTGG
2641	CTGCTCAGCGGTGCTTGAAAGACA	TGTCTTTCAAGCACCGCTGAGCAG
2642	GGAGATTGACTTCGCGTTTCACCA	TGGTGAAACGCGAAGTCAATCTCC
2643	ATGGTTCAGAAGGTTCGTCGGGTT	AACCCGACGAACCTTCTGAACCAT
2644	GAGTGGAGCATTCTCGGCCCTCAA	TTGAGGGCCGAGAATGCTCCACTC
2645	TGGATTGGAACCAATCCCGCACAA	TTGTGCGGGATTGGTTCCAATCCA
2646	TGCTCTTGTGGTCACTCGAGAGGA	TCCTCTCGAGTGACCACAAGAGCA

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2647	TTGGGAGCACGGTTACCGCCTGTG	CACAGGCGGTAACCGTGCTCCCAA
2648	CAACGCGAGCTAACGGTAGTTTCG	CGAAACTACCGTTAGCTCGCGTTG
2649	AACGCTGAGCGCTCACCTTCACCT	AGGTGAAGGTGAGCGCTCAGCGTT
2650	CCGTCGTAGATCTGGAGGCTTCAA	TTGAAGCCTCCAGATCTACGACGG
2651	GGATGGCATGGGCACACTGTAACC	GGTTACAGTGTGCCCATGCCATCC
2652	TCGCTCGTAGATATCCTTCACGCC	GGCGTGAAGGATATCTACGAGCGA
2653	GGAGCAATACCGCGTCCAAAACAC	GTGTTTTGGACGCGGTATTGCTCC
2654	TTGTTCAGACTTAGGCGCTGCCCA	TGGGCAGCGCCTAAGTCTGAACAA
2655	CGGCGGTACTCTTTCCACTGTCCT	AGGACAGTGGAAAGAGTACCGCCG
2656	AAGACGATTGCCCACGTGCCAGAG	CTCTGGCACGTGGGCAATCGTCTT
2657	AGGTGAGCGCAGGCATATTGCAGT	ACTGCAATATGCCTGCGCTCACCT
2658	CTCGGGCCTGTACAGCAAAGCCGT	ACGGCTTTGCTGTACAGGCCCGAG
2659	TGCGCGCTAGTGCTGCCTATGATC	GATCATAGGCAGCACTAGCGCGCA
2660	CCATCCTTTGCCTTGAGGGTTGGC	CTTACCCTCAAGGCATTAGGATGG
2661	AACAACAGCGTAAGACGGACAGGG	CCCTGTCCGTCTTACGCTGTTGTT
2662	GAGGCGGTCGAGGCTCACAATATT	AATATTGTGAGCCTCGACCGCCTC
2663	CGAGGTTAGACGCCTATGACCCAC	GTGGGTCATAGGCGTCTAACCTCG
2664	AACTTGCTATACCGGGCGCAGCAA	TTGCTGCGCCCGGTATAGCAAGTT
2665	CGCGGTGAATCGCATACACAGCGC	GCGCTGTGTATGCGATTCACCGCG
2666	CACCGAATCAAGCCATATGGCTCT	AGAGCCATATGGCTTGATTCGGTG
2667	TTCACAGCTATCCTAGGCGCTGCC	GGCAGCGCCTAGGATAGCTGTTAA
2668	AGAAGCGCGAAGTGTACCCCGCAT	ATGCGGGGTACACTTCGCGCTTCT
2669	TGCATGGTATTTGCGTGCGATAGG	CCTATCGCACGCAAATACCATGCA
2670	GGCCGGACCTATGTGAGATGGAAA	TTTCCATCTCACATAGGTCCGGCC
2671	TCAACCTGAGTCCTGATCCCAAGC	GCTTGGGATCAGGACTCAGGTTGA
2672	TGCTTACCGTTCAGGGAGGCGTGT	ACACGCCTCCCTGAACGGTAAGCA
2673	GGAGAGTTACGCGATGAGCCACCT	AGGTGGCTCATCGCGTAACTCTCC
2674	CGGTATGCGGTGTACAGCTTTCGT	ACGAAAGCTGTACACCGCATACCG
2675	GTAAGCCGGGTCTCGTGTCGCCGT	ACGGCGACACGAGACCCGGCTTAC
2676	GCGTAGTGCGAACGCCCCGACCTA	TAGGTCGGGGCGTTCGCACTACGC
2677	TCCTCGCGGCTTACGTCAAATTCG	CGAATTTGACGTAAGCCGCGAGGA
2678	CGACGTTCAAAGCGGGAGAGGAGG	CCTCCTCTCCCGCTTTGAACGTCG
2679	CGAGGCACCCCGACATGTTGAGAT	ATCTCAACATGTCGGGGTGCCTCG
2680	CTATTTCGTGCCGCGTCGGACAAG	CTTGTCCGACGCGGCACGAAATAG
2681	GGCTGCTCAGTGACGTGTCAACTG	CAGTTGACACGTCACTGAGCAGCC
2682	ATCACTCGTGCGTACCCGACCGTC	GACGGTCGGGTACGCACGAGTGAT
2683	CGAGATGTCCTATACCGTGGCGAA	TTCGCCACGGTATAGGACATCTCG
2684	TCACACCGAGCCCCATAAATGAAA	TTTCATTTATGGGGCTCGGTGTGA
2685	AGCTACGTGTCTCGAGCAAAAGCG	CGCTTTTGCTCGAGACACGTAGCT
2686	TCAGGGCGAGTTTTTTCAGCGGCG	CGCCGCTGAAAAAACTCGCCCTGA
2687	TTCGTTCTGTCTATTTTTGCCCCG	CGGGGCAAAAATAGACAGAACGAA
2688	TGGTATGCCCAGGATCCAGCCTAC	GTAGGCTGGATCCTGGGCATACCA
2689	TCTCAGTCGTTAGGCCAATGGCGG	CCGCCATTGGCCTAACGACTGAGA
2690	AAAGATCACCGTGGAGCGATCGGC	GCCGATCGCTCCACGGTGATCTTT
2691	TAGCAGGACTTGCACTCGTGATGC	GCATCACGAGTGCAAGTCCTGCTA
2692	TGCCCACGGTACCGTTCAAGGCTG	CAGCCTTGAACGGTACCGTGGGCA
2693	TGAGGTGCGTCGCCCTAAGTAATG	CATTACTTAGGGCGACGCACCTCA
2694	AGCAAGGGTTACAACCCGCAACCC	GGGTTGCGGGTTGTAACCCTTGCT
2695	CACAACAGCCAGTATTCGCCACAA	TTGTGGCGAATACTGGCTGTTGTG
2696	GGCAACACCATACTCGACGAGCTC	GAGCTCGTCGAGTATGGTGTTGCC
2697	GGCTGGATTGACAATTTAGCCCCT	AGGGGCTAAATTGTCAATCCAGCC
2698	CGTGAGAAATGCTACACGCGTCAG	CTGACGCGTGTAGCATTTCTCACG
2699	CGCATCTGCCCCATTTTGTTCCTT	AAGGAACAAAATGGGGCAGATGCG
2700	GTCGGCCTAGTCGGCAGAACGGTG	CACCGTTCTGCCGACTAGGCCGAC
2701	TCCCTCACCTTCCAAAAATGTGCT	AGCACATTTTTGGAAGGTGAGGGA
2702	GGGCAAGAACATGAGAACAGACCG	CGGTCTGTTCTCATGTTCTTGCCC
2703	TCGTCCTGGTACGACTTGCGTAGA	TCTACGCAAGTCGTACCAGGACGA
2704	TGGCGGTTGCATGTGATGATCAAG	CTTGATCATCACATGCAACCGCCA
2705	CCTCGCGTGAGTAAAAACCGTCCG	CGGACGGTTTTTACTCACGCGAGG
2706	ACTTCCGCCACAGAATGCGGCCAG	CTGGCCGCATTCTGTGGCGGAAGT
2707	GTGTAGAGCTTGGGTAGCCCCGTT	AACGGGGCTACCCAAGCTCTACAC
2708	CGCAGCATCCGAGTTAACACACAT	ATGTGTGTTAACTCGGATGCTGCG
2709	ATGAGCCTGGGATGATCCGCTGGT	ACCAGCGGATCATCCCAGGCTCAT
2710	CCTGGCATAAGTGCCGACATGCTT	AAGCATGTCGGCACTTATGCCAGG
2711	GCGCATGAAAAACTACGACGGACG	CGTCCGTCGTAGTTTTTCATGCGC
2712	AAAGATGGGTCGATGGGAGCGTCT	AGACGCTCCCATCGACCCATCTTT
2713	ATCCTGGGCACGAGCGGATTTATC	GATAAATCCGCTCGTGCCCAGGAT
2714	TCACCGCATTTGATAGTTACGCGA	TCGCGTAACTATCAAATGCGGTGA
2715	TGGTGGAGCGGACTCTGGTGTTAT	ATAACACCAGAGTCCGCTCCACCA
2716	CACAATGAAAAAACAATGGCCCCA	TGGGGCCATTGTTTTTTCATTGTG
2717	CCTTGCCGCGCTTGTGGTACCAAC	GTTGGTACCACAAGCGCGGCAAGG
2718	CCGAGACCTTTGCCACACGAAAGA	TCTTTCGTGTGGCAAAGGTCTCGG
2719	ACCGCGGTGTACACCTGAGCAGGC	GCCTGCTCAGGTGTACACCGCGGT
2720	GTCGTACGCTTACCGCAGCGGAGA	TCTCCGCTGCGGTAAGCGTACGAC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2721	TCGTAATTTGACCGACACACGCAG	CTGCGTGTGTCGGTCAAATTACGA
2722	CCTAGACGGATACCCTGAGCGGAA	TTCCGCTCAGGGTATCCGTCTAGG
2723	AAGCGACAGCAGAGGTTCAGTCGC	GCGACTGAACCTCTGCTGTCGCTT
2724	GCGTGGACGATATCACCTGGGCGT	ACGCCCAGGTGATATCGTCCACGC
2725	GTCGGAGAGCCAGTGGTACGGCTT	AAGCCGTACCACTGGCTCTCCGAC
2726	TATCCGCACGGTATAGCAGTTGCA	TGCAACTGCTATACCGTGCGGATA
2727	CATCAGTCGGGCTACCTTCAGCCT	AGGCTGAAGGTAGCCCGACTGATG
2728	CGGATTAATGCCTTTCCTCGGAAT	ATTCCGAGGAAAGGCATTAATCCG
2729	TTCGTCGTGCCAAGCTAATGCAAG	CTTGCATTAGCTTGGCACGACGAA
2730	GGCCGAGACCACCAGTAACAGGTT	AACCTGTTACTGGTGGTCTCGGCC
2731	CGCGCGGAAGCATTGAAGTTACTA	TAGTAACTTGAATGCTTCCGCGCG
2732	TCGGCTTACCGCTTCGTCTGACTT	AAGTCAGACGAAGCGGTAAGCCGA
2733	GACTGACGTCAAGGCAAGCAACAC	GTGTTGCTTGCCTTGACGTCAGTC
2734	AGAGGAAGGAGGGGCTGTGACAGA	TCTGTCACAGCCCCTCCTTCCTCT
2735	TTCCAATGCGAGAGATGGCAGGCT	AGCCTGCCATCTCTCGCATTGGAA
2736	AAATGGGGTGCTTCGAATATGTCG	CGACATATTCGAAGCACCCCATTT
2737	GCTGTCGGATTATTGCACGCCTGT	ACAGGCGTGCAATAATCCGACAGC
2738	CCGACTTTGTTTATGTTGCTGGCG	CGCCAGCAACATAAACAAAGTCGG
2739	GCTGCGATATAACCCGTCCCAGAA	TTCTGGGACGGGTTATATCGCAGC
2740	TGAGCTGGGCGTCAACTCCGAAGA	TCTTCGGAGTTGACGCCCAGCTCA
2741	CCCAAGCATCCTAAATCTCCCTCG	CGAGGGAGATTTAGGATGCTTGGG
2742	CGACAGCAATCCACATGCATTCTT	AAGAATGCATGTGGATTGCTGTCG
2743	TGAATGGTCGGGAAACCAATGCAT	ATGCATTGGTTTCCCGACCATTCA
2744	CTTTGCATCGAGATGGGGGGTAGC	GCTACCCCCCATCTCGATGCAAAG
2745	TCCATTTCCTCCGCAACTCTCAGG	CCTGAGAGTTGCGGAGGAAATGGA
2746	CCACTACGCCATCCTGACAACGAG	CTCGTTGTCAGGATGGCGTAGTGG
2747	TAGTAAGGCCAATGTACGCCGTCC	GGACGGCGTACATTGGCCTTACTA
2748	GTCATGCATATGGGGCCTGTTTTC	GAAAACAGGCCCCATATGCATGAC
2749	ACCGGTAGACGTTAGCGGGTTCAA	TTGAACCCGCTAACGTCTACCGGT
2750	TTGGTTCAAACGGCCACACGTCTC	GAGACGTGTGGCCGTTTGAACCAA
2751	GACACAAACTGCAAGGGAGGCATG	CATGCCTCCCTTGCAGTTTGTGTC
2752	CTCGAGCGCTGTCATCATATCGGC	GCCGATATGATGACAGCGCTCGAG
2753	GCGGCTAAGGCACAAGTAGACGTG	CACGTCTACTTGTGCCTTAGCCGC
2754	ACAGCCTAAATGGCGCAAGACCGA	TCGGTCTTGCGCCNTTTAGGCTGT
2755	CCGATGATGTAAGCCGTCGGCCCT	AGGGCCGACGGCTTACATCATCGG
2756	AGGAGCAAACAAACGCCAGTGACA	TGTCACTGGCGTTTGTTTGCTCCT
2757	ACGAATTGGGTAGCCGGACTGAGA	TCTCAGTCCGGCTACCCAATTCGT
2758	CTGTTCCAGTTCGGCAAGTGCGGC	GCCGCACTTGCCGAACTGGAACAG
2759	AGACAAGTCAGGAACGCGTTTCCG	CGGAAACGCGTTCCTGACTTGTCT
2760	AGACGACGGCCAGATACGCTGCCA	TGGCAGCGTATCTGGCCGTCGTCT
2761	AGGAAGCGCTTCTTCCGGTTCTTC	GAAGAACCGGAAGAAGCGCTTCCT
2762	GATGGACGCAAACACAAGGCGATC	GATCGCCTTGTGTTTGCGTCCATC
2763	CGCATAGCAGTCTCCGCATCTTGG	CCAAGATGCGGAGACTGCTATGCG
2764	TGGTTCCGGTGTGCAACAGATAAA	TTTATCTGTTGCACACCGGAACCA
2765	CCGTATGCCACCTCCAGAACTCAA	TTGAGTTCTGGAGGTGGCATACGG
2766	GTAAAGGAACCCCTCGGGAATCCT	AGGATTCCCGAGGGGTTCCTTTAC
2767	GCCTGATGCTCGTTAAAATTGCGT	ACGCAATTTTAACGAGCATCAGGC
2768	TCGCACTTGGACCATGAGATCTGA	TCAGATCTCATGGTCCAAGTGCGA
2769	TTCTCAGGCTGGGCAAGAGTCTGT	ACAGACTCTTGCCCAGCCTGAGAA
2770	CGGACCTGGGGATGCTGGGATTAC	GTAATCCCAGCATCCCCAGGTCCG
2771	TCGAGCCGATAGGGTTGGCATTGC	GCAATGCCAACCCTATCGGCTCGA
2772	TACGTGTGTCCCACACACGTCGTA	TACGACGTGTGTGGGACACACGTA
2773	TGTGAAATTCGCGTTTCGCATCTT	AAGATGCGAAACGCGAATTTCACA
2774	TTGCAATGCTCCAAAAAAACTGCC	GGCAGTTTTTTTGGAGCATTGCAA
2775	TCTCATCATGGCTGTGGCTTTGAC	GTCAAAGCCACAGCCATGATGAGA
2776	ATTACACCGCTTGGTTTGGAGTGG	CCACTCCAAACCAAGCGGTGTAAT
2777	GCCGTGCAATGCACAGAGTTCAAG	CTTGAACTCTGTGCATTGCACGGC
2778	GAGATCAGACCGTGTCGGATGCTG	CAGCATCCGACACGGTCTGATCTC
2779	CCACCTATCTTGATGCGACCTGGA	TCCAGGTCGCATCAAGATAGGTGG
2780	CCGATCGCCGTTTATGTCTACGGC	GCCGTAGACATAAACGGCGATCGG
2781	GAAAATCACGGTAAGGCACGTTCG	CGAACGTGCCTTACCGTGATTTTC
2782	GATTCTCGCTTCCCAACGAGCATA	TATGCTCGTTGGGAAGCGAGAATC
2783	TGTGAAATGTGGCAGTCTCAGGGA	TCCCTGAGACTGCCACATTTCACA
2784	CGATCCTGCGTGCCTCATCCAGGC	GCCTGGATGAGGCACGCAGGATCG
2785	CCCTCAAGTGGGCGAGGGTTTTCA	TGAAAACCCTCGCCCACTTGAGGG
2786	TCGCCTCCGCCTCGTGTGTAGAAG	CTTCTACACACGAGGCGGAGGCGA
2787	TTCGCTTTCAGCTCATTGGAACGA	TCGTTCCAATGAGCTGAAAGCGAA
2788	TGTAATCTGAACAAGCGGACCCCT	AGGGGTCCGCTTGTTCAGATTACA
2789	TGGAATCTTTCTTGAGCGCCGTGA	TCACGGCGCTCAAGAAAGATTCCA
2790	GGCTTTCATCTTTAACCGCTCGGT	ACCGAGCGGTTAAAGATGAAAGCC
2791	TGATCCGAGCCATTCCTAATCACC	GGTGATTAGGAATGGCTCGGATCA
2792	TGGTAGGCGTGATGTCCTACGCAA	TTGCGTAGGACATCACGCCTACCA
2793	AGGCATCGGTAAGAAGGCCCTATG	CATAGGGCCTTCTTACCGATGCCT
2794	CGCCGCGAGACGATCCTTATTATT	AATAATAAGGATCGTCTCGCGGCG

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2795	ACATGGACGAAATTACGCCCGTCA	TGACGGGCGTAATTTCGTCCATGT
2796	ACAGAAAGGTGGGGAGCCTAGCGT	ACGCTAGGCTCCCCACCTTTCTGT
2797	AGGCTTGCGAACATGGGTAGTGAC	GTCACTACCCATGTTCGCAAGCCT
2798	GCGTGGGCCTTGCTCCTGTTTAAC	GTTAAACAGGAGCAAGGCCCACGC
2799	GAATACAGAGCGTCCGATGTGCCC	GGGCACATCGGACGCTCTGTATTC
2800	GCGACTCTGTAGGGAGCGCGATAT	ATATCGCGCTCCCTACAGAGTCGC
2801	GGTGCACTCATATGCGTCGCATCG	CGATGCGACGCATATGAGTGCACC
2802	CTGTCCCACGGGGAAACCTTACTT	AAGTAAGGTTTCCCCGTGGGACAG
2803	TGGCTTACTGTCGCAATCTAGGCC	GGCCTAGATTGCGACAGTAAGCCA
2804	GCACTCAGTTTCCGGTATCCCATG	CATGGGATACCGGAAACTGAGTGC
2805	GTGAGGTTCACGTAAGGCACAGCG	CGCTGTGCCTTACGTGAACCTCAC
2806	GTAACGCCTTTGTCCCCAGCGTAT	ATACGCTGGGGACAAAGGCGTTAC
2807	GCATTGATATGGTCGGTCTCGCCT	AGGCGAGACCGACCATATCAATGC
2808	GTGGGTTTAAGTGACAACGGACGC	GCGTCCGTTGTCACTTAAACCCAC
2809	CAAAACCCTGCCGAAGATGTTGGT	ACCAACATCTTCGGCAGGGTTTTG
2810	TCCGAGGAGACTGAACCTGCTACC	GGTAGCAGGTTCAGTCTCCTCGGA
2811	CGGGGAAGAACGGATTCGCTAAAT	ATTTAGCGAATCCGTTCTTCCCCG
2812	TGGTTAGCTTATGTCGGAGCCACC	GGTGGCTCCGACATAAGCTAACCA
2813	ACGCGTCGATGAACTAAGGCTCGC	GCGAGCCTTAGTTCATCGACGCGT
2814	TTCTCCTGACGAGTACGCAGTGGG	CCCACTGCGTACTCGTCAGGAGAA
2815	TCCGCGGTTGCCGGTTTGTTAGGA	TCCTAACAAACCGGCAACCGCGGA
2816	TGGCGCATCTTTCAGGGGATGATG	CATCATCCCCTGAAAGATGCGCCA
2817	TCTTTGGTCCTTGGTGTTTACGCG	CGCGTAAACACCAAGGACCAAAGA
2818	GAGAACTCCCGCTACAAAGGAGCC	GGCTCCTTTGTAGCGGGAGTTCTC
2819	TTAACGTGGGAACCGTTGGTGAAT	ATTCACCAACGGTTCCCACGTTAA
2820	GGGACACCATCCTTGGGTTTGTTA	TAACAAACCCAAGGATGGTGTCCC
2821	CAACAAACCGCCTTGGGAAGTGAC	GTCACTTCCCAAGGCGGTTTGTTG
2822	TTGAAGGCCACCGATACTGATCGC	GCGATCAGTATCGGTGGCCTTCAA
2823	TCGTAATAGAACTGCGCCCAATGC	GCATTGGGCGCAGTTCTATTACGA
2824	GGCACGTTGCCCAAGTTGGATCCA	TGGATCCAACTTGGGCAACGTGCC
2825	ACATAGCTTGGCCGGACACCCACC	GGTGGGTGTCCGGCCAAGCTATGT
2826	CTTGCCGCCTTGCGAGTGGCTAAA	TTTAGCCACTCGCAAGGGGGCAAG
2827	AATGGCTCGCCAGATACCGCAGCC	GGCTGCGGTATCTGGCGAGCCATT
2828	CAAAAGGCGTGTCCGAACTTTTCA	TGAAAAGTTCGGACACGCCTTTTG
2829	CGTCCACTTAGGTGGAGATACGCC	GGCGTATCTCCACCTAAGTGGACG
2830	GAGCCTCTTCGTCCTGAAGACCGA	TCGGTCTTCAGGACGAAGAGGCTC
2831	AACATCAAGCGGCAATCTCCCTTC	GAAGGGAGATTGCCGCTTGATGTT
2832	CGTCCTGACATTATTAGCGCGTGC	GCACGCGCTAATAATGTCAGGACG
2833	TGTGCAGACCCTAACGACCTACGG	CCGTAGGTCGTTAGGGTCTGCACA
2834	TTAGGTCGGCCTAGACCCTCCGTA	TACGGAGGGTCTAGGCCGACCTAA
2835	TCACATCGCTTAACTGAGCGCATT	AATGCGCTCAGTTAAGCGATGTGA
2836	AGACCTTCCCACGCGAGATGCTAC	GTAGCATCTCGCGTGGGAAGGTCT
2837	TTCTTGCCAAAATGTGTCCAACCA	TGGTTGGACACATTTTGGCAAGAA
2838	CAGTTTTCATTGCAGCGAAAGCAA	TTGCTTTCGCTGCAATGAAAACTG
2839	GTGCCGATCCCGAGACAAGTTCCG	CGGAACTTGTCTCGGGATCGGCAC
2840	CATCCGGCCTCAGTGATTCTTACC	GGTAAGAATCACTGAGGCCGGATG
2841	TGCTGGAAGCCACAAACGTTACGT	ACGTAACGTTTGTGGCTTCCAGCA
2842	GAACGGCCAGGGGACAACTATCGT	ACGATAGTTGTCCCCTGGCCGTTC
2843	TCATCTAGGTCGAAGCGCAAGACA	TGTCTTGCGCTTCGACCTAGATGA
2844	TTTGGTTACCAGCACCCATGTTCC	GGAACATGGGTGCTGGTAACCAAA
2845	GACAACAGTCTGTCCGCCACATCC	GGATGTGGCGGACAGACTGTTGTC
2846	GCCAACAGGAGATGCTTGCACCAT	ATGGTGCAAGCATCTCCTGTTGGC
2847	CTAAGGACGCATTGACCCCTGAAC	GTTCAGGGGTCAATGCGTCCTTAG
2848	GGTCGCGTAGTGAGTCAGAGGCGT	ACGCCTCTGACTCACTACGCGACC
2849	TTACCTCATGAACCCTTCGCGGCG	CGCCGCGAAGGGTTCATGAGGTAA
2850	TATACAGCATCGTCGCCGGGCATA	TATGCCCGGCGACGATGCTGTATA
2851	GCTTAGTGGCGTCTTCGTCGTAGG	CCTACGACGAAGACGCCACTAAGC
2852	TGCACTCCGCAACCTTGTGAAATC	GATTTCACAAGGTTGCGGAGTGCA
2853	AACCCGTCATGCCGACTCCATCTA	TAGATGGAGTCGGCATGACGGGTT
2854	AGCACTAGTGGCGTGCGACTTTGC	GCAAAGTCGCACGCCACTAGTGCT
2855	TAAAAAGTGCCGCTAACCACGGAG	CTCCGTGGTTAGCGGCACTTTTTA
2856	CGCGGAATATTTGTCGTCCGATTC	GAATCGGACGACAAATATTCCGCG
2857	TTCTGCTATGCGTATGGGGGCCCG	CGGGCCCCCATACGCATAGCAGAA
2858	CGAACTACTGCGTCAGCCTCTCCC	GGGAGAGGCTGACGCAGTAGTTCG
2859	AGATGACGAATTAGCGGGGTTGGG	CCCAACCCCGCTAATTCGTCATCT
2860	AATAACAGTGGCAATGAGCGGGAA	TTCCCGCTCATTGCCACTGTTATT
2861	ATATGTTGATTCCCGTGCTGCACA	TGTGCAGCACGGGAATCAACATAT
2862	AGAGTGGGCACCACCAGGCAGACA	TGTCTGCCTGGTGGTGCCCACTCT
2863	AGGCCTGGGTTTCTGCGTCTTAGT	ACTAAGACGCAGAAACCCAGGCCT
2864	CGGACGTGACAAACGGACATACCC	GGGTATGTCCGTTTGTCACGTCCG
2865	CAAGTGTTTCGGCCCAACTCTCGA	TCGAGAGTTGGGCCGAAACACTTG
2866	GAACCCTTATCGGGATAGGCCCAA	TTGGGCCTATCCCGATAAGGGTTC
2867	CAGGACGATACCAAGCAGAACGCC	GGCGTTCTGCTTGGTATCGTCCTG
2868	GCGTCTTGTGATTCTGCCCTAACC	GGTTAGGGCAGAATCACAAGACGC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2869	AAACAACCATCAATGTCGGGTCCA	TGGACCCGACATTGATGGTTGTTT
2870	TGTAAAGACCAGTTGGCGGCTCTC	GAGAGCCGCCAACTGGTCTTTACA
2871	GCGTTTTGACTCGGTGGTCAGTCC	GGACTGACCACCGAGTCAAAACGC
2872	TGTATGGAGGCACGGCAAAGTCTT	AAGACTTTGCCGTGCCTCCATACA
2873	TTACCTAGGTTCCCGCTGACACGC	GCGTGTCAGCGGGAACCTAGGTAA
2874	CGGCTCGTGGGAATCCTCTGAAGA	TCTTCAGAGGATTCCCACGAGCCG
2875	CCGGCTCGGGCATTTCTTGGACCT	AGGTCCAAGAAATGCCCGAGCCGG
2876	CAACGATGGAATTGTCTCCTTGGG	CCCAAGGAGACAATTCCATCGTTG
2877	CGGGCTATTATCGGGATTATGGGG	CCCCATAATCCCGATAATAGCCCG
2878	ACGTACCTGAAGATGCAACGGCGG	CCGCCGTTGCATCTTCAGGTACGT
2879	CATGGTGCAGCACGCACAAGTAAC	GTTACTTGTGCGTGCTGCACCATG
2880	CGTCGATATGTCGGGCTATTGCCT	AGGCAATAGCCCGACATATCGACG
2881	AAATGCAGGGTTAAGAGGAGGCCC	GGGCCTCCTCTTAACCCTGCATTT
2882	TGCAAGGACTGATTCTCCCGCTGT	ACAGCGGGAGAATCAGTCCTTGCA
2883	GTTTTCGGAACGCCGCAGAGTTCA	TGAACTCTGCGGCGTTCCGAAAAC
2884	CCCTCGATGGTTCATTGGGAAGAC	GTCTTCCCAATGAACCATCGAGGG
2885	CCTGTTCGCTCATAATGGTGGGGT	ACCCCACCATTATGAGCGAACAGG
2886	GAAAGAACGATCGCGGAATAGCTG	CAGCTATTCCGCGATCGTTCTTTC
2887	TCCACCTGTGTGCCTTTATCCTCA	TGAGGATAAAGGCACACAGGTGGA
2888	TCCTCCGTGAACCGCTGTAGCGCA	TGCGCTACAGCGGTTCACGGAGGA
2889	TTGAGATTTTTACGGTTTCCCCGC	GCGGGGAAACCGTAAAAATCTCAA
2890	CGATAGGACGTGGGCATGTCCCAG	CTGGGACATGCCCACGTGCTATCG
2891	CCCGAACTTTGAGATCCGAGAACA	TGTTCTCGGATCTCAAAGTTCGGG
2892	TCACGCAGCTAGAGTCGCGTTACC	GGTAACGCGACTCTAGCTGCGTGA
2893	AGATAACGCCCACTGACGACATGC	GCATGTCGTCAGTGGGCGTTATCT
2894	ACGCTTAGAGCTCCGATGCCGAAT	ATTCGGCATCGGAGCTCTAAGCGT
2895	GGGCGATAACTTAAATTGTGCCGC	GCGGCACAATTTAAGTTATCGCCC
2896	AGGACGTTCATGCGTCTCTTTGCA	TGCAAAGAGACGCATGAACGTCCT
2897	CGGCTGGTAGAACTGTGCATCGTA	TACGATGCACAGTTCTACCAGCCG
2898	TTCGAAATGTACTTCCCACGCGGA	TCCGCGTGGGAAGTACATTTCGAA
2899	GCAGGTTGGCTGTCTTGTGGAGTC	GACTCCACAAGACAGCCAACCTGC
2900	CGTTTGGTTGCTTCAAGAACCGGT	ACCGGTTCTTGAAGCAACCAAACG
2901	CATACTTGGTTGTTGTGCCCACGC	GCGTGGGCACAACAACCAAGTATG
2902	GGGGTCGGCTGAAGTGTTTTATCC	GGATAAAACACTTCAGCCGACCCC
2903	GTGACGGTTGATTAACGACCGTGG	CCACGGTCGTTAATCAACCGTCAC
2904	CTTATGGCAGCGCCAGGGGCACTC	GAGTGCCCCTGGCGCTGCCATAAG
2905	GTTAGGGGACCCACCTCGTTTGAT	ATCAAACGAGGTGGGTCCCCTAAC
2906	CAATATAAATGCCGCGCATCGAGT	ACTCGATGCGCGGCATTTATATTG
2907	TTCTTCATCAGCAGTCCCCGAGAA	TTCTCGGGGACTGCTGATGAAGAA
2908	AGTTGCGTCCCTTGATGGCATTTT	AAAATGCCATCAAGGGACGCAACT
2909	CCGACTTTCGTCCACGATTCCTCT	AGAGGAATCGTGGACGAAAGTCGG
2910	ACTTGGCCGGACGACAGCAAAGAC	GTCTTTGCTGTCGTCCGGCCAAGT
2911	CACCGCGGTAGATGTATCCCTTCC	GGAAGGGATACATCTACCGCGGTG
2912	GTTAGCTTTAGCTCGGCACGCCTG	CAGGCGTGCCGAGCTAAAGCTAAC
2913	GCGCATAAGAAGGTCCGCTAAAGC	GCTTTAGCGGACCTTCTTATGCGC
2914	ACATCATCACGCCTGGCGTGACCA	TGGTCACGCCAGGCGTGATGATGT
2915	CCGGCGAAGTTTGGTGTGATTAGA	TCTAATCACACCAAACTTCGCCGG
2916	TGCACCGCCAGATTGTGCTGAGTC	GACTCAGCACAATCTGGCGGTGCA
2917	ACATGTGAAGTGAGTGCCGTCCAA	TTGGACGGCACTCACTTCACATGT
2918	CCTCTGGAGGGGATTAGCCACGCT	AGCGTGGCTAATCCCCTCCAGAGG
2919	CAATAGCCATGTCACTGGCAACGG	CCGTTGCCAGTGACATGGCTATTG
2920	ACCCATGGTTCCAACGTTCTTTCG	CGAAAGAACGTTGGAACCATGGGT
2921	AATCTGGTCTTGGCATCCTCCAAA	TTTGGAGGATGCCAAGACCAGATT
2922	GTATACCGGTGCATGCTGAAGCAA	TTGCTTCAGCATGCACCGGTATAC
2923	AGTGTTCTGGTTCGAGTCGACCCG	CGGGTCGACTCGAACCAGAACACT
2924	CGGGTATTCGACACACACGAGGAC	GTCCTCGTGTGTGTCGAATACCCG
2925	AGTGCAACAGAGCGCTTGGTCACG	CGTGACCAAGCGCTCTGTTGCACT
2926	TGCACCTATAGTTTGGTGCCGGTG	CACCGGCACCAAACTATAGGTGCA
2927	TGCTCACGTACCAGGACACTCGAG	CTCGAGTGTCCTGGTACGTGAGCA
2928	AGTCCACACCTCGAACGACAGGCG	CGCCTGTCGTTCGAGGTGTGGACT
2929	CGCCGACCTGGTCAAAGAGCGCTA	TAGCGCTCTTTGACCAGGTCGGCG
2930	GCCTAAGGGCCTGTCGTTTTCCGA	TCGGAAAACGACAGGCCCTTAGGC
2931	TGTGCGTGCTTATGTTCCGGTCTC	GAGACCGGAACATAAGCACGCACA
2932	CAACCGTTGGCCGTAACAAAAATC	GATTTTTGTTACGGCCAACGGTTG
2933	CGAGAATCAAGGCGTACCATCTCG	CGAGATGGTACGCCTTGATTCTCG
2934	GCGTAGGCAGCCTCCAGGGAATGG	CCATTCCCTGGAGGCTGCCTACGC
2935	GATGGTGTTTTCGCCAAGACCAAT	ATTGGTCTTGGCGAAAACACCATC
2936	CAAGCTAGGGACAGAATTGCCCAC	GTGGGCAATTCTGTCCCTAGCTTG
2937	TAAATAGGCGAAACCGTTCGTGGC	GCCACGAACGGTTTCGCCTATTTA
2938	TCAAGACCCGCAATGTGTTCATGT	ACATGAACACATTGCGGGTCTTGA
2939	GCGGCTGGTAGACTCTTTGCACAA	TTGTGCAAAGAGTCTACCAGCCGC
2940	CAGGCGTAAACCTGAACCAAACGG	CCGTTTGGTTCAGGTTTACGCCTG
2941	GCCGATCTGTGCTGAGGTTCATCA	TGATGAACCTCAGCACAGATCGGC
2942	GATATCGCGTCGCAATATCACGCG	CGCGTGATATTGCGACGCGATATC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
2943	CCCTGCACGATTAAGCCACCTGTA	TACAGGTGGCTTAATCGTGCAGGG
2944	TGACATACAGATTTGTGTGGCCCC	GGGGCCACACAAATCTGTATGTCA
2945	GTTTGCGGCCGGTATTCACGATGT	ACATCGTGAATACCGGCCGCAAAC
2946	TTTTACCTGGCCATTGGTGAGCTC	GAGCTCACCAATGGCCAGGTAAAA
2947	CTCTACTCAATCAGGGTGGGAGCG	CGCTCCCACCCTGATTGAGTAGAG
2948	GGGTTGGAGGGAGTCTTGACCATT	AATGGTCAAGACTCCCTCCAACCC
2949	CGAGGTCGGTAAGGAAAAGCTTGC	GCAAGCTTTTCCTTACCGACCTCG
2950	CTTTACGCAGGCACCTCCGAGCTG	CAGCTCGGAGGTGCCTGCGTAAAG
2951	CATTGTATGGCCACGTGATTGACG	CGTCAATCACGTGGCCATACAATG
2952	GTACGGTGCGAGAGCGCCTAAGCG	CGCTTAGGCGCTCTCGCACCGTAC
2953	TTCCATATGCCGAAATGGACACAA	TTGTGTCCATTTCGGCATATGGAA
2954	TACGCCTTCCGCTATAGCTCGTGA	TCACGAGCTATAGCGGAAGGCGTA
2955	CTGTACGCCACGCATGAAGGGTGA	TCACCCTTCATGCGTGGCGTACAG
2956	CTTACGCGTCCAATGACTGCCACC	GGTGGCAGTCATTGGACGCGTAAG
2957	CACATGGTAGAACTCGATCGGCAG	CTGCCGATCGAGTTCTACCATGTG
2958	CGCACCGGAAACTAGTGGATGTGT	ACACATCCACTAGTTTCCGGTGCG
2959	ACTATGGCAACCGACACTTGGTCC	GGACCAAGTGTCGGTTGCCATAGT
2960	CTAGTTTGCGCTACCCACCTGCAA	TTGCAGGTGGGTAGCGCAAACTAG
2961	TAGTATCGCCCGACAATAGCCTGG	CCAGGCTATTGTCGGGCGATACTA
2962	CCAATATTTACGGCCTGATCAGCG	CGCTGATCAGGCCGTAAATATTGG
2963	ATGGCTATCCCTTACTGGCTCGCC	GGCGAGCCAGTAAGGGATAGCCAT
2964	CAAAACTTGGCAGGCTTGGGACTT	AAGTCCCAAGCCTGCCAAGTTTTG
2965	AATGACCGAGGCTGCAAGATTGAC	GTCAATCTTGCAGCCTCGGTCATT
2966	ATCATCTTTCGCCACCAGACATGG	CCATGTCTGGTGGCGAAAGATGAT
2967	CGTTATTACCGATGCACACGTTGC	GCAACGTGTGCATCGGTAATAACG
2968	CACACTGGCAATCGCCTCCCTCGT	ACGAGGGAGGCGATTGCCAGTGTG
2969	AGGTTGGTAGGAAATCGGAGCGCT	AGCGCTCCGATTTCCTACCAACCT
2970	GCTGAACCACTGTGGTCAAGATGC	GCATCTTGACCACAGTGGTTCAGC
2971	CGTTGAGTACGACACGGTCGAGGT	ACCTCGACCGTGTCGTACTCAACG
2972	TTTTTCCGCCGCAATGTGATCTAA	TTAGATCACATTGCGGCGGAAAAA
2973	ACAATACCTCGACCGCTCAGCATC	GATGCTGAGCGGTCGAGGTATTGT
2974	AGTATCCCTGCTGGCATACACGGG	CCCGTGTATGCCAGCAGGGATACT
2975	TCTTGGGCTCGGTAGTTCAGCACT	AGTGCTGAACTACCGAGCCCAAGA
2976	CCCTATATCGAGCCCATAGGGCGA	TCGCCCTATGGGCTCGATATAGGG
2977	CACGAGTGGCATCAACGGCCTACT	AGTAGGCCGTTGATGCCACTCGTG
2978	TGCAGGGTCCGATGTGTTCAAGTA	TACTTGAACACATCGGACCCTGCA
2979	GCTTGACCGCTGCTAACCTCGTAC	GTACGAGGTTAGCAGCGGTCAAGC
2980	TTTTGCATCTCTCCACCATCCAGA	TCTGGATGGTGGAGAGATGCAAAA
2981	AGAATGTGCACCGGCTTCCATCTT	AAGATGGAAGCCGGTGCACATTCT
2982	TGTTATGACCCGCTCTGTGGCGTG	CACGCCACAGAGCGGGTCATAACA
2983	GGAGCTCCTGTTTCATCGAGGCTA	TAGCCTCGATGAAACAGGAGCTCC
2984	CATTTTGCTGTTTGGGGGTCCCAT	ATGGGACCCCCAAACAGCAAAATG
2985	CCCGCTCCTTCACGTGAGACGAGA	TCTCGTCTCACGTGAAGGAGCGGG
2986	GCGCTCAAGTCGATTGCCACAACC	GGTTGTGGCAATCGACTTGAGCGC
2987	CGGTTGACGGAGACCGCAGTACTT	AAGTACTGCGGTCTCCGTCAACCG
2988	ACTCAAGACCGGTGCACCTCCAGC	GCTGGAGGTGCACCGGTCTTGAGT
2989	TTTCGTGTGCATGCAAGTAATGGC	GCCATTACTTGCATGCACACGAAA
2990	GCGGCGTTAGCTCGAGCTAACAAA	TTTGTTAGCTCGAGCTAACGCCGC
2991	GGGTATCCTGCCCGAGCAGTAATT	AATTACTGCTCGGGCAGGATACCC
2992	GGCTCCGAATCTCTTGTCCGGTCT	AGACCGGACAAGAGATTCGGAGCC
2993	AGGATGGCCACGCCGAATCAAAGT	ACTTTGATTCGGCGTGGCCATCCT
2994	GTGCGGGGACGTTTACATAACGAG	CTCGTTATGTAAACGTCCCCGCAC
2995	ACTTTTGACCTGAGGCCGCTTGCA	TGCAAGCGGCCTCAGGTCAAAAGT
2996	ACTCCGCTTCAATGGAGACCGTTG	CAACGGTCTCCATTGAAGCGGAGT
2997	GATCGGAATTCGCCGCCATATTGA	TCAATATGGCGGCGAATTCCGATC
2998	ATGCGTGCCCATGGAATGACTTTT	AAAAGTCATTCCATGGGCACGCAT
2999	CCGCATCGCACGAAGGCAGGTCAT	ATGACCTGCCTTCGTGCGATGCGG
3000	CACCCTATGCGTCTCCAATTCCTG	CAGGAATTGGAGACGCATAGGGTG
3001	TGATATGCATCGCTGAGCCTCTGT	ACAGAGGCTCAGCGATGCATATCA
3002	AGCTTCACACGCTCACTGAACCTG	CAGGTTCAGTGAGCGTGTGAAGCT
3003	AACCCGGAACCTCCTCTCACTCGG	CCGAGTGAGAGGAGGTTCCGGGTT
3004	CTCGTCAAACTTGGCCGAGGAGTC	GACTCCTCGGCCAAGTTTGACGAG
3005	GTAGCTGGCAACAGGCAATCAGGA	TCCTGATTGCCTGTTGCCAGCTAC
3006	CTTGTCACGAATATTCGCCAAGCG	CGCTTGGCGAATATTCGTGACAAT
3007	CAGTATCTGAAACACGGGGTGCTG	CAGCACCCCGTGTTTCAGATACTG
3008	GGCTAAAATGGGCGCCCACGTGTA	TACACGTGGGCGCCCATTTTAGCC
3009	ATGAGAGCCAAGCGCCTCAACTCC	GGAGTTGAGGCGCTTGGCTCTCAT
3010	TATTGTTAGGCACCGCTTCGCGCT	AGCGCGAAGCGGTGCCTAACAATA
3011	GGAACTAGATTGCCAGTGCTCGCC	GGCGAGCACTGGCAATCTAGTTCC
3012	AGTCGACCCCAAGGCAACTGGGTC	GACCCAGTTGCCTTGGGGTCGACT
3013	GGTACTGTTAGCTCGACGATGGCC	GGCCATCGTCGAGCTAACAGTACC
3014	CCGCAATACTTGACGGTAACAGGG	CCCTGTTACCGTCAAGTATTGCGG
3015	AATTCCGGGTTTGAACGGTTGGAA	TTCCAACCGTTCAAACCCGGAATT
3016	GACACGCAATCGGGTCTATGCGAA	TTCGCATAGACCCGATTGCGTGTC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
3017	GATTTTGGCGTCTCATTGCGTGAT	ATCACGCAATGAGACGCCAAAATC
3018	TGCCATAGGGAGGAAACGCAATTA	TAATTGCGTTTCCTCCCTATGGCA
3019	GAGGTGCCCATGTTAGTGGTGTCC	GGACACCACTAACATGGGCACCTC
3020	GCTTTAGCGGTCATACGACCACCA	TGGTGGTCGTATGACCGCTAAAGC
3021	CCGCTACCAACAATCCGATTAACG	CGTTAATCGGATTGTTGGTAGCGG
3022	GAGGATCTGGCCACATCGAGAAAG	CTTTCTCGATGTGGCCAGATCCTC
3023	CTCGTTTGGTACCACGTTTTGCCG	CGGCAAAACGTGGTACCAAACGAG
3024	AATACACGCGGCGTAAACAGACGA	TCGTCTGTTTACGCCGCGTGTATT
3025	TGTCATGGGCCAAATGACAGTGGC	GCCACTGTCATTTGGCCCATGACA
3026	ACAGCACTTCCGACCCGTGTACGA	TCGTACACGGGTCGGAAGTGCTGT
3027	CTCCGTAAAGAGCACAGCTTTGCC	GGCAAAGCTGTGCTCTTTACGGAG
3028	ACGAACAGGTAGGGATCGGTCCTC	GAGGACCGATCCCTACCTGTTCGT
3029	TGGATCCACCTTACCGCGCCATCG	CGATGGCGCGGTAAGGTGGATCCA
3030	AGTATCAAATAGCGGCGCGGCAAG	CTTGCCGCGCCGCTATTTGATACT
3031	GAATTACATTGTGGATGGAGGCGG	CCGCCTCCATCCACAATGTAATTC
3032	CTCCTCGGGGAGTCGAGGAGTACG	CGTACTCCTCGACTCCCCGAGGAG
3033	AGTGTCGAGCCAACTCCCACCAAT	ATTGGTGGGAGTTGGCTCGACACT
3034	AAATGACATCCGTTTGGCCACAGC	GCTGTGGCCAAACGGATGTCATTT
3035	CGAATCATATCGCCATCGAACTGG	CCAGTTCGATGGCGATATGATTCG
3036	TATAATGCACTCGCTTGGTGCGCA	TGCGCACCAAGCGAGTGCATTATA
3037	GCCAAGCAGATGGTAATTATGGCG	CGCCATAATTACCATCTGCTTGGC
3038	CACGCGGGAAGAGCACGTAGAACT	AGTTCTACGTGCTCTTCCCGCGTG
3039	TACCCGAGAATTTGGAGAACAGCG	CGCTGTTCTCCAAATTCTCGGGTA
3040	TGACGGCAAACTGTGGCATCTATC	GATAGATGCCACAGTTTGCCGTCA
3041	CACAGTGTTCCAGCCCTTGACGAT	ATCGTCAAGGGCTGGAACACTGTG
3042	TACCCGCCCACACATGAAAGTTGG	CCAACTTTCATGTGTGGGCGGGTA
3043	TGGCATATTTAAGATTCGGCGACG	CGTCGCCGAATCTTAAATATGCCA
3044	ACTGAAAAAAGAACGGGTAGCGGG	CCCGCTACCCGTTCTTTTTTCAGT
3045	TCTGACCGCAATAGGTGGTCATTG	CAATGACCACCTATTGCGGTCAGA
3046	ACTTTTTGGCGGGCCCTCTCTCGT	ACGAGAGAGGGCCCGCCAAAAAGT
3047	CTGCCCAGATCATTGCGCGATCCG	CGGATCGCGCAATGATCTGGGCAG
3048	CGGAGGTTAAATGCTTTAACCGGC	GCCGGTTAAAGCATTTAACCTCCG
3049	AGGCGTCTCCAAACGTCCTTCTGT	ACAGAAGGACGTTTGGAGACGCCT
3050	AGATGCTATCCTGAGTGGGCCTGC	GCAGGCCCACTCAGGATAGCATCT
3051	ACAGGGTGAAGAGACCGTGGGATG	CATCCCACGGTCTCTTCACCCTGT
3052	GACTGTCTAACGGACGACACGACG	CGTCGTGTCGTCCGTTAGACAGTC
3053	AGCTGTTAGGACCCGACAACCGGT	ACCGGTTGTCGGGTCCTAACAGCT
3054	TTGCGTAGTGTGGGCATTTCCTCT	AGAGGAAATGCCCACACTACGCAA
3055	ATGCGCGCTTCTTTCCTTGATGTA	TACATCAAGGAAAGAAGCGCGCAT
3056	TTAAGGGCGTCCGCGTCTATTCAG	CTGAATAGACGCGGACGCCCTTAA
3057	ACCTTTAAACTTGTACCGCGGCCC	GGGCCGCGGTACAAGTTTAAAGGT
3058	AGGGATGCAGAGGCACCACATGTT	AACATGTGGTGCCTCTGCATCCCT
3059	CGGTTCGACGTATGAGCATCCGCA	TGCGGATGCTCATACGTCGAACCG
3060	CAGGGCGATAGTCACATGGAGGTT	AACCTCCATGTGACTATCGCCCTG
3061	GCTTGACTGCCCCGTTTCATATGT	ACATATGAAACGGGGCAGTCAAGC
3062	CGAAGGGGTTGTGCAATTACCCGA	TCGGGTAATTGCACAACCCCTTCG
3063	AAAACGCACCGCAATGACAAAATT	AATTTTGTCATTGCGGTGCGTTTT
3064	ATTCCTGGACAAGACCCTCAACCG	CGGTTGAGGGTCTTGTCCAGGAAT
3065	CCTACCTGCCTGCTAGCGGTGAGG	CCTCACCGCTAGCAGGCAGGTAGG
3066	GCTCGTAAATGGGGAGGAATTGGA	TCCAATTCCTCCCCATTTACGAGC
3067	ACATGAAAACAGGCTCAATTGGGG	CCCCAATTGAGCCTGTTTTCATGT
3068	GTTCCGCACATGGATTGAGGTCTC	GAGACCTCAATCCATGTGCGGAAC
3069	GGCACCCAATACCACGAAGAAGAA	TTCTTCTTCGTGGTATTGGGTGCC
3070	AGGGGCATTTCGAACTCCATCTTT	AAAGATGGAGTTCGAAATGCCCCT
3071	CATCATCACAAAGGAACGTCGGTG	CACCGACGTTCCTTTGTGATGATG
3072	TAAAGACCCACCGTCAGCAGCAGC	GCTGCTGCTGACGGTGGGTCTTTA
3073	CCCCAGGCGTAATGCACCACATAG	CTATGTGGTGCATTACGCCTGGGG
3074	GCAGGTCGAACGCTAGTGGTTGAA	TTCAACCACTAGCGTTCGACCTGC
3075	GGAACTTAGGAGTTCACGTCGCCA	TGGCGACGTGAACTCCTAAGTTCC
3076	GCAGATACGGCTAGCTGAGGTGGC	GCCACCTCAGCTAGCCGTATCTGC
3077	CACAGGCCTAGAGCCTCGGCGTTC	GAACGCCGAGGCTCTAGGCCTGTG
3078	GTTTTGCGCGCATGAGGTTCATTA	TAATGAACCTCATGCGCGCAAAAC
3079	TTGCGCCTGATGCCAGCAGTACTA	TAGTACTGCTGGCATCAGGCGCAA
3080	GATATCAGGCTTTCCCACTGCCGC	GCGGCAGTGGGAAAGCCTGATATC
3081	TGCGCGGAGACGGAGATCTATGAA	TTCATAGATCTCCGTCTCCGCGCA
3082	CATTGGTGTTGGCTGAGAGTGGAC	GTCCACTCTCAGCCAACACCAATG
3083	GTCGGCACTTGGGCACCATTAATA	TATTAATGGTGCCCAAGTGCCGAC
3084	ATCGATCGGTGTCTCACCACGGAG	CTCCGTGGTGAGACACCGATCGAT
3085	CGTAGCCTTCCACCGTGTCGATAG	CTATCGACACGGTGGAAGGCTACG
3086	CGCTCTCCGTCTGAGGAAAAGGGG	CCCCTTTTCCTCAGACGGAGAGCG
3087	TCGCCCCAGCCAAGGATATATTGC	GCAATATATCCTTGGCTGGGGCGA
3088	TCTCTTGCAAGGAACTCTGCCGTC	GACGGCAGAGTTCCTTGCAAGAGA
3089	GTCCTGGACAGACGGAGGGTGTTA	TAACACCCTCCGTCTGTCCAGGAC
3090	GCCAAATTAAGCGGGCTCGTAATC	GATTACGAGCCCGCTTAATTTGGC

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
3091	CCATTTGTTGACCGATGGGAGGGG	CCCCTCCCATCGGTCAACAAATGG
3092	TGGTCAAAAGAGCACGATCCAGGA	TCCTGGATCGTGCTCTTTTGACCA
3093	CGCTACTAAGACGCCCCTGTCCAC	GTGGACAGGGGCGTCTTAGTAGCG
3094	CATACCTCCCGCTTGGATTCACTG	CAGTGAATCCAAGCGGGAGGTATG
3095	CCGCGGAAGGAATGTCATCTACAA	TTGTAGATGACATTCCTTCCGCGG
3096	CACGGGACATTCATTCACAGGACG	CGTCCTGTGAATGAATGTCCCGTG
3097	AGGAGTCACCCACTCCGCACAAAA	TTTTGTGCGGAGTGGGTGACTCCT
3098	TCATGACAGCGCACCCCATACCAT	ATGGTATGGGGTGCGCTGTCATGA
3099	GGTAGGGGACTATCGATCGTGCTG	CAGCACGATCGATAGTCCCCTACC
3100	ATGTCTCACTACCGCACGTAGCGG	CCGCTACGTGCGGTAGTGAGACAT
3101	ACGGAGGAGCGACTCGTTCGCTGC	GCAGCGAACGAGTCGCTCCTCCGT
3102	GAAGTCTGTCGCCGGTGGACGGAC	GTCCGTCCACCGGCGACAGACTTC
3103	CCGTAACGTGTATTCGGACGAGCG	CGCTCGTCCGAATACACGTTACGG
3104	CGTGGAAGCGACTTAACCAATCGT	ACGATTGGTTAAGTCGCTTCCACG
3105	GGCATGGGCTATGCCTCACACTAG	CTAGTGTGAGGCATAGCCCATGCC
3106	GGGTCGTATTTCAGCATCGTTCGT	ACGAACGATGCTGAAATACGACCC
3107	AATGGTCGCGCAAACCGTAAGAAT	ATTCTTACGGTTTGCGCGACCATT
3108	CTGGATTCGGTACGTCCAACGTTT	AAACGTTGGACGTACCGAATCCAG
3109	CGCAAAAACACCCGTAGCCAAGAA	TTCTTGGCTACGGGTGTTTTTGCG
3110	TATGGATACGCTTTTGGACTGGGC	GCCCAGTCCAAAAGCGTATCCATA
3111	GCTTCAAACGCGCTTCACGCTGGT	ACCAGCGTGAAGCGCGTTTGAAGC
3112	TACAGCCCGCTCTACCTCGCCACC	GGTGGCGAGGTAGAGCGGGCTGTA
3113	TCAACCGATGTCAAAATGCACGTT	AACGTGCATTTTGACATCGGTTGA
3114	AGCTCTCTCCGAAGTAGGGCGGTA	TACCGCCCTACTTCGGAGAGAGCT
3115	ACGCACACATGGAGACTTGGCTCC	GGAGCCAAGTCTCCATGTGTGCGT
3116	TTCTTGAAAGCTAGTGGGGCGCTA	TAGCGCCCCACTAGCTTTCAAGAA
3117	CAATCACGGCTGGGCTATTCTGTG	CACAGAATAGCCCAGCCGTGATTG
3118	GTGGCGACCCGTCGGTGAAAGAGT	ACTCTTTCACCGACGGGTCGCCAC
3119	CGTCGAATGCCGAACCAGTTAAGT	ACTTAACTGGTTCGGCATTCGACG
3120	TGCGTATTTGCATGCTCACAGCTG	CAGCTGTGAGCATGCAAATACGCA
3121	CGCAGTTGGTTTGTGCACGGCTGC	GCAGCCGTGCACAAACCAACTGCG
3122	GTTTTTCCGTGAAAACTGGCATCG	CGATGCCAGTTTTCACGGAAAAAC
3123	ACAGGTTCCTCCACCACGATTTGA	TCAAATCGTGGTGGAGGAACCTGT
3124	CTAGCGCGCTTTTAGGTCCTTGCG	CGCAAGGACCTAAAAGCGCGCTAG
3125	CAAAATCAAAGGGATCAACCGGTG	CACCGGTTGATCCCTTTGATTTTG
3126	AACGTAACCCCAGTGAGTCAGGCA	TGCCTGACTCACTGGGGTTACGTT
3127	TCAACCGGTGCACTTTAGAACGCC	GGCGTTCTAAAGTGCACCGGTTGA
3128	ATCGCAAAGTTGCAGGCGAATACT	AGTATTCGCCTGCAACTTTGCGAT
3129	ATATGTCCCTGGGTGCTGCACAAC	GTTGTGCAGCACCCAGGGACATAT
3130	TGGCACTTTGTAGTGCTGCGGTGG	CCACCGCAGCACTACAAAGTGCCA
3131	ACGCACGACGTCCTTCTAAGCTCG	CGAGCTTAGAAGGACGTCGTGCGT
3132	CCCACGTGCACTATAGGGATTTCG	CGAAATCCCTATAGTGCACGTGGG
3133	CCGCGCTTGGTCAGTCATCCTTGC	GCAAGGATGACTGACCAAGCGCGG
3134	AGCGGCTCAGGGAATAACAACAGG	CCTGTTGTTATTCCCTGAGCCGCT
3135	ACAACGCGATCGGAGGCAACCAGT	ACTGGTTGCCTCCGATCGCGTTGT
3136	AGCAATTGCCTCCGTAGAAACCCA	TGGGTTTCTACGGAGGCAATTGCT
3137	GAGTCGTGGCATCGCCTGCTATCG	CGATAGCAGGCGATGCCACGACTC
3138	TCTATGCAAATACTGCGCTTGCGA	TCGCAAGCGCAGTATTTGCATAGA
3139	TCAGCTTAAGTTACGGTGTGGCCG	CGGCCACACCGTAACTTAAGCTGA
3140	TCCAAGGTCGAACAGGGATCAGAA	TTCTGATCCCTGTTCGACCTTGGA
3141	GTTAGGCTGGCGTCAATAGCGCTT	AAGCGCTATTGACGCCAGCCTAAC
3142	GGTGTCATAAGGAAGAGGGCATCG	CGATGCCCTCTTCCTTATGACACC
3143	CCGGCGGGCTAGATCAATATTTCT	AGAAATATTGATCTAGCCCGCCGG
3144	CTAACGTCAAGTTTTACGCCCCGA	TCGGGGCGTAAAACTTGACGTTAG
3145	GCAGCACAGTTTTCCGATTTGCGG	CCGCAAATCGGAAAACTGTGCTGC
3146	CGCACGCAAGGGGAGGGATGACTG	CAGTCATCCCTCCCCTTGCGTGCG
3147	CGGGGCCGAAAAGGACGTCACAAG	CTTGTGACGTCCTTTTCGGCCCCG
3148	TTCTCCAACACGGCTAACCGGTAG	CTACCGGTTAGCCGTGTTGGAGAA
3149	TTACAGCCTGGCCCGAGGTAGTTG	CAACTACCTCGGGCCAGGCTGTAA
3150	TTTCGGGCAGCATGAGTTATCGAA	TTCGATAACTCATGCTGCCCGAAA
3151	CTACTGGACGCCCTGCTTCGAAGT	ACTTCGAAGCAGGGCGTCCAGTAG
3152	GGTCGTCCGACGTGAAAAGACCAA	TTGGTCTTTTCACGTCGGACGACC
3153	GTTTTCGAGCTCTTTCTCCGCAGG	CCTGCGGAGAAAGAGCTCGAAAAC
3154	GCGTGAAGGTACCCAGTGTCACAG	CTGTGACACTGGGTACCTTCACGC
3155	TTTCTGAACGCTTCGACGCAACAC	GTGTTGCGTCGAAGCGTTCAGAAA
3156	TGCTAATAAGCACGCCTAGCCCGT	ACGGGCTAGGCGTGCTTATTAGCA
3157	AAATTAATTGTGGTGGCTCCGGCG	CGCCGGAGCCACCACAATTAATTT
3158	TTACAATCCTCGGGCTCACTGACA	TGTCAGTGAGCCCGAGGATTGTAA
3159	GCTGAAGGACAAGGCGTGGGCAAC	GTTGCCCACGCCTTGTCCTTCAGC
3160	GGGATAGGAGACCCTCGCAATGGT	ACCATTGCGAGGGTCTCCTATCCC
3161	TTGCAGTACGTCCTTGCGCATGAA	TTCATGCGCAAGGACGTACTGCAA
3162	TTGATCACTGGATTGGGTGCGAAC	GTTCGCACCCAATCCAGTGATCAA
3163	TCTGCAGACGTTGCGAGAGATGAT	ATCATCTCTCGCAACGTCTGCAGA
3164	AGTCTAGCAGGGATCGAAGCGGAT	ATCCGCTTCGATCCCTGCTAGACT

TABLE 2-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
3165	GGGGTCCCGCAACAACTAATGAAG	CTTCATTAGTTGTTGCGGGACCCC
3166	CAACCTCTTATGTGGTGTGCGCGA	TCGCGCACACCACATAAGAGGTTG
3167	CTCGCTGGGTTGCTGGAGTAGCAC	GTGCTACTCCAGCAACCCAGCGAG
3168	CGTTGTATTGTGCAACGCGAAGTT	AACTTCGCGTTGCACAATACAACG
3169	GGGCTCAAAGTGCCTGAGTCGAAA	TTTCGACTCAGGCACTTTGAGCCC
3170	CTGCTGTGCCCTCTCAGTGAGAGC	GCTCTCACTGAGAGGGCACAGCAG
3171	CGGACGTACTGTTCGGAGTCCTCA	TGAGGACTCCGAACAGTACGTCCG
3172	GTATACCACCATACCGGGACCGCA	TGCGGTCCCGGTATGGTGGTATAC

[0208]

TABLE 3

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
17	TTCGCCGTCGTGTAGGCTTTTCAA	TTGAAAAGCCTACACGACGGCGAA
18	GTTCCCAGTGAAGCTGCGATCTGG	CCAGATCGCAGCTTCACTGGGAAC
19	TACTTGGCATGGAATCCCTTACGC	GCGTAAGGGATTCCATGCCAAGTA
20	ACTAGCATATTTCAGGGCACCGGC	GCCGGTGCCCTGAAATATGCTAGT
21	GAACGGTCAATGAACCCGCTGTGA	TCACAGCGGGTTCATTGACCGTTC
22	GCGGCCTTGGTTCAATATGAATCG	CGATTCATATTGAACCAAGGCCGC
23	GATCGTTAGAGGGACCTTGCCCGA	TCGGGCAAGGTCCCTCTAACGATC
24	TGGACCTAGTCCGGCAGTGACGAA	TTCGTCACTGCCGGACTAGGTCCA
25	ATAAACTACCCAGGACGGGCGGAA	TTCCGCCCGTCCTGGGTAGTTTAT
26	CATCGGTTCGCGCCAATCCAGATA	TATCTGGATTGGCGCGAACCGATG
27	GTCGGGCATAGAGCCGACCACCCT	AGGGTGGTCGGCTCTATGCCCGAC
28	CTTGGGTCATGATTCACCGTGCTA	TAGCACGGTGAATCATGACCCAAG
29	TGCCTAACGTGCTAATCAGCAGCG	CGCTGCTGATTAGCACGTTAGGCA
30	CGCATGTTGGAGCATATGCCCTGA	TCAGGGCATATGCTCCAACATGCG
31	AGCCACTGCATCAGTGCTGTTCAA	TTGAACAGCACTGATGCAGTGGCT
32	GGTTGTTTTGAGGCGTCCCACACT	AGTGTGGGACGCCTCAAAACAACC
33	TCGACCAAGAGCAAGGGCGGACCA	TGGTCCGCCCTTGCTCTTGGTCGA
34	GACATCGCTATTGCGCATGGATCA	TGATCCATGCGCAATAGCGATGTC
35	GAAATACGAAGTCTGCGGGAGTCG	CGACTCCCGCAGACTTCGTATTTC
36	TGTCATGAATGATTGATCGCGCGA	TCGCGCGATCAATCATTCATGACA
37	ATATCGGGATTCGTTCCCGGTGAA	TTCACCGGGAACGAATCCCGATAT
38	GCGAGCGTACCGAAGGGCCTAGAA	TTCTAGGCCCTTCGGTACGCTCGC
39	TTACCGGCAGCGGACTTCCGAATT	AATTCGGAAGTCCGCTGCCGGTAA
40	GTAATCGAGAGCTGCGCGCCGTCT	AGACGGCGCGCAGCTCTCGATTAC
41	CCTGTTAGCGTAGGCGAGTCGATC	GATCGACTCGCCTACGCTAACAGG
42	TAGCGGACCGGCAGAATGAGTTCC	GGAACTCATTCTGCCGGTCCGCTA
43	GGTACATGCACTACGCGCACTCGG	CCGAGTGCGCGTAGTGCATGTACC
44	AATTCATCTCGGACTCCCGCGGTA	TACCGCGGGAGTCCGAGATGAATT

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
45	GCCAAATCTGGATTGGCAGGAATG	CATTCCTGCCAATCCAGATTTGGC
46	TGCATTTTCGGTTGAGGCACATCC	GGATGTGCCTCAACCGAAAATGCA
47	CCGCTCAATTCACCATGCTTCGCT	AGCGAAGCATGGTGAATTGAGCGG
48	CTCGGAAAGGTGCAACTTTGGTGT	ACACCAAAGTTGCACCTTTCCGAG
49	AATTCGACCAGCAGAACGTCCCAT	ATGGGACGTTCTGCTGGTCGAATT
50	GCCAGAGTCTCAACCTCACGGGAT	ATCCCGTGAGGTTGAGACTCTGGC
51	CCAACAACTGGAACGGGAACCCGC	GCGGGTTCCCGTTCCAGTTGTTGG
52	GAGAACTGATCGCTGAGGGGCATG	CATGCCCCTCAGCGATCAGTTCTC
53	GGCACACTAGACTTGTGGCACCGA	TCGGTGCCACAAGTCTAGTGTGCC
54	TCACATCCAAATATGGTCCGCGAA	TTCGCGGACCATATTTGGATGTGA
55	GTCTGCCGGTGTGACCGCTTCATT	AATGAAGCGGTCACACCGGCAGAC
56	CATCGCAGAGCATAAACACCCTCA	TGAGGGTGTTTATGCTCTGCGATG
57	GTTGGTATCTATGGCAGAGGCGGA	TCCGCCTCTGCCATAGATACCAAC
58	ACGAGGTGCCGCTGAGGTTCCATT	AATGGAACCTCAGCGGCACCTCGT
59	GGAATGAGTGGACCCAGGCACATT	AATGTGCCTGGGTCCACTCATTCC
60	TGTCAATATGCGTCCGTGTCGTCT	AGACGACACGGACGCATATTGACA
61	TGATGAGCCTCAGGGTACGAGGCA	TGCCTCGTACCCTGAGGCTCATCA
62	CACCGCGGTGTTCCTACAGAATGA	TCATTCTGTAGGAACACCGCGGTG
63	TTGTTGCCAATGGTGTCCGCTCGG	CCGAGCGGACACCATTGGCAACAA
64	TTAACCTGCGTCTGCCCCTTTCCT	AGGAAAGGGGCAGACGCAGGTTAA
65	AGGCGCGTTCCTGCCTTAGTGACG	CGTCACTAAGGCAGGAACGCGCCT
66	TAGGGCGATGGCACGAAGCTTCAA	TTGAAGCTTCGTGCCATCGCCCTA
67	TGCATAGAGCCAAAGTCGGCGATG	CATCGCCGACTTTGGCTCTATGCA
68	TTGAGAGGCAGGTGGCCACACGGA	TCCGTGTGGCCACCTGCCTCTCAA
69	TCCGCATTGTGAGAAAAAACGAGC	GCTCGTTTTTTCTCACAATGCGGA
70	GGCGGTTTCCGTAGCTATAGGTGC	GCACCTATAGCTACGGAAACCGCC
71	GGTGAAAATTTCGTAGCCACGGGC	GCCCGTGGCTACGAAATTTTCACC
72	CCGACGGAGGATGAAGACAATCAC	GTGATTGTCTTCATCCTCCGTCGG
73	CCAGTTTGGCCCAATTCGCCAAAA	TTTTGGCGAATTGGGCCAAACTGG
74	GGATCTATTAGGCCGTGCGCACAG	CTGTGCGCACGGCCTAATAGATCC
75	CGGATGTCACCGTTTGGACTTTCA	TGAAAGTCCAAACGGTGACATCCG
76	ATCGCAAATCCTGCTCGTCCCTAA	TTAGGGACGAGCAGGATTTGCGAT
77	CAGGGCATGCAATAATCGAGGTTC	GAACCTCGATTATTGCATGCCCTG
78	CATGCGTTGATATATGGGCCCAAG	CTTGGGCCCATATATCAACGCATG
79	CAGCTGCAGCTTGTGACCAACCAC	GTGGTTGGTCACAAGCTGCAGCTG
80	TTGTATGTCTGCCGACCGGCGACC	GGTCGCCGGTCGGCAGACATACAA
81	GATGGCGCCCGTTGATAGGTATGG	CCATACCTATCAACGGGCGCCATC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
82	ATGAGAATCGCCGGCAATCTGCTA	TAGCAGATTGCCGGCGATTCTCAT
83	ATTTGCACTGACCGCAGGCTCGTG	CACGAGCCTGCGGTCAGTGCAAAT
84	CAGGGAGAACGGTTAAGTTCCCGT	ACGGGAACTTAACCGTTCTCCCTG
85	AGGCCGGCGATCGAGGAGTTTGGT	ACCAAACTCCTCGATCGCCGGCCT
86	ACACGGTGGTCTCTGATAGCGACC	GGTCGCTATCAGAGACCACCGTGT
87	GTGCAACGCCGAGGACTTCCATCA	TGATGGAAGTCCTCGGCGTTGCAC
88	TCGGTGCCTGATAGCCATTCCGAT	ATCGGAATGGCTATCAGGCACCGA
89	TGAAATACCACACAGCCAATTGGC	GCCAATTGGCTGTGTGGTATTTCA
90	GCATCGTGTACATGACTGCCGCGA	TCGCGGCAGTCATGTACACGATGC
91	CAGTGTTCTAACGGCGCGCGTGAA	TTCACGCGCGCCGTTAGAACACTG
92	CGCTTGCAACGTTGCACCTACTCT	AGAGTAGGTGCAACGTTGCAAGCG
93	CGAAAAACTAGTGGGCTCGCCGCG	CGCGGCGAGCCCACTAGTTTTTCG
94	CTTTCAGGGGAACTGCCGGAGTCG	CGACTCCGGCAGTTCCCCTGAAAG
95	TTGTGGCCTTCTTGTAAAGGCACG	CGTGCCTTTACAAGAAGGCCACAA
96	TCCACGAACGGCGACCCGTTGTCT	AGACAACGGGTCGCCGTTCGTGGA
97	CGACCTTGCACGAAACCTAACGAG	CTCGTTAGGTTTCGTGCAAGGTCG
98	GTGCAGCTTCACGAGCCAGCCTGA	TCAGGCTGGCTCGTGAAGCTGCAC
99	CGCTTTCGTGCGAATAGACGATGA	TCATCGTCTATTCGCACGAAAGCG
100	TGCGCTTACAGGCTCCTAGTGGTC	GACCACTAGGAGCCTGTAAGCGCA
101	CACGCGCTTAGTCGCGATCGCATA	TATGCGATCGCGACTAAGCGCGTG
102	CGGAGGGAGGGAGCTAGCCTTCGA	TCGAAGGCTAGCTCCCTCCCTCCG
103	GCATCCGGCCTGTTGATGACGCCT	AGGCGTCATCAACAGGCCGGATGC
104	AGGCCAATCGATCTTATTGCCGAG	CTCGGCAATAAGATCGATTGGCCT
105	CCTTCCAATGATTGCATACGCCCA	TGGGCGTATGCAATCATTGGAAGG
106	AACACTTGATCAGGCGGGTCGTCT	AGACGACCCGCCTGATCAAGTGTT
107	TGGAATCAAGGCCGTAAAGGACAG	CTGTCCTTTACGGCCTTGATTCCA
108	GCTCCCGTAACCTGTCCACCAGTG	CACTGGTGGACAGGTTACGGGAGC
109	AGTGGTGAATGGCCGCTACCCTGA	TCAGGGTAGCGGCCATTCACCACT
110	TGTTGAAGCGAGCTAAAACGGCCA	TGGCCGTTTTAGCTCGCTTCAACA
111	CAGCGCTCCAGAATTGACAGCAAT	ATTGCTGTCAATTCTGGAGCGCTG
2	TTCGAAGCGCACGTCCCTTTTCAA	TTGAAAAGGGACGTGCGCTTCGAA
3	AACGCGTGGGGAATGGGACATCAA	TTGATGTCCCATTCCCCACGCGTT
114	CACGAGATACCGGCGTAAGGGTGG	CCACCCTTACGCCGGTATCTCGTG
115	CTACGGCAAACGTGTGGAATGGGT	ACCCATTCCACACGTTTGCCGTAG
116	GTAGGGCGATGACGGGCGAACTAC	GTAGTTCGCCCGTCATCGCCCTAC
117	AATCGACCTCCGCACACATTCGCA	TGCGAATGTGTGCGGAGGTCGATT
118	GAGTCAGCATGGCGGCGGAGATTC	GAATCTCCGCCGCCATGCTGACTC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
119	AGATAAAGACGCTGGCAACACGGG	CCCGTGTTGCCAGCGTCTTTATCT
120	GGTACCTCAACGCGAACCACTTGT	ACAAGTGGTTCGCGTTGAGGTACC
121	AAGCGATGGCTACCCAAGAGCGAT	ATCGCTCTTGGGTAGCCATCGCTT
122	AGAGCTTATGCAGAACCAGGCGCC	GGCGCCTGGTTCTGCATAAGCTCT
123	ATCGGTCTCACGCAGGGTTGGATA	TATCCAACCCTGCGTGAGACCGAT
124	TAGGTTGCCCGCCAGAAGAAACAT	ATGTTTCTTCTGGCGGGCAACCTA
125	CGGTGCTGTTGCAAAAGCCTGTAG	CTACAGGCTTTTGCAACAGCACCG
126	TGATGAAAGTTTGCGGCAGGACAC	GTGTCCTGCCGCAAACTTTCATCA
127	GTTGAGTGCAGGATGCAGCGATAG	CTATCGCTGCATCCTGCACTCAAC
128	AACATTGCGCGGTCCACCAGGGTT	AACCCTGGTGGACCGCGCAATGTT
129	GGGCAGTTAGAGAGGGCCAGAAGT	ACTTCTGGCCCTCTCTAACTGCCC
130	TCGAGCTGGTCCCCGTGAACGTGT	ACACGTTCACGGGGACCAGCTCGA
131	GTCTTGGGGGCCGCTTAGTGAAAA	TTTTCACTAAGCGGCCCCCAAGAC
132	ACTGTTGGCTTGCTCTCATGTCCA	TGGACATGAGAGCAAGCCAACAGT
133	AGGACCATTCGGAAGGCGAAGATA	TATCTTCGCCTTCCGAATGGTCCT
134	CTTGGGAGGCATCCGCTATAAGGA	TCCTTATAGCGGATGCCTCCCAAG
135	AATAAACGGAACGCACCGCTACAG	CTGTAGCGGTGCGTTCCGTTTATT
136	TTGTACGTGCGGTCCCCATAAGCA	TGCTTATGGGGACCGCACGTACAA
137	CGCACCAAACTGAGTTTCCCAGAC	GTCTGGGAAACTCAGTTTGGTGCG
138	ACCTGATCGTTCCCCTATTGGGAA	TTCCCAATAGGGGAACGATCAGGT
139	GGAACAGAGGCGAGGGGACTGAGC	GCTCAGTCCCCTCGCCTCTGTTCC
140	CCCTGCCTTGGCGTGTCGGCTTAT	ATAAGCCGACACGCCAAGGCAGGG
141	ACTCTGACACGCCAACTCCGGAAG	CTTCCGGAGTTGGCGTGTCAGAGT
142	CTGACGGTTTTCATTCGGCGTGCC	GGCACGCCGAATGAAAACCGTCAG
143	TGCGGTGGTTCATTGGAGCTGGCC	GGCCAGCTCCAATGAACCACCGCA
144	GCATGGCCAACTAGTGACTCGCAA	TTGCGAGTCACTAGTTGGCCATGC
145	AGGCCGTAAAGCGAATCTCACCTG	CAGGTGAGATTCGCTTTACGGCCT
146	CGAATATTATGCCGAGAATCCGCG	CGCGGATTCTCGGCATAATATTCG
147	ACAGACGAGCTCCCAACCACATGA	TCATGTGGTTGGGAGCTCGTCTGT
148	GGACGGTTTGTGCTGGATTGTCTG	CAGACAATCCAGCACAAACCGTCC
149	AAAGGCTATTGAGTTGGTTGGGCG	CGCCCAACCAACTCAATAGCCTTT
150	GATGGCCTATTCGGAGATCGGGCC	GGCCCGATCTCCGAATAGGCCATC
151	GATCCAGTAGGCAGCTTCATCCCA	TGGGATGAAGCTGCCTACTGGATC
152	AATAACTCGCGCGGGTATGCTTCT	AGAAGCATACCCGCGCGAGTTATT
153	GGAGGAGGTTTGTCTCGGAAAGCA	TGCTTTCCGAGACAAACCTCCTCC
154	CTTTGGTATGGCACATGCTGCCCG	CGGGCAGCATGTGCCATACCAAAG
155	AGAAAGGCTCGAGCAACGGGAACT	AGTTCCCGTTGCTCGAGCCTTTCT

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
156	AATCTACCGCACTGGTCCGCAAGT	ACTTGCGGACCAGTGCGGTAGATT
157	CGTGGCGGCCACAGTTTTTGGAGG	CCTCCAAAAACTGTGGCCGCCACG
158	TTGCAGTTCAATCCATACGCACGT	ACGTGCGTATGGATTGAACTGCAA
159	GGCCCAAAGCCCCAGACCATTTTA	TAAAATGGTCTGGGGCTTTGGGCC
160	CGCCTGTCTTTGTCTCCGGACAAT	ATTGTCCGGAGACAAAGACAGGCG
161	TGAGGCAACAGGGGCCAAAAACTA	TAGTTTTTGGCCCCTGTTGCCTCA
162	AGCGGAAGTAGTCCTCGGCTCGTC	GACGAGCCGAGGACTACTTCCGCT
163	GGCCCCAAGGCTTAGAGATAGTGG	CCACTATCTCTAAGCCTTGGGGCC
164	GCACGTGAAGTTTAACCGCGATTC	GAATCGCGGTTAAACTTCACGTGC
165	AGCGGCAGAAACGTTCCTTGACGG	CCGTCAAGGAACGTTTCTGCCGCT
166	TCGTCGAGCAGACGAGATTGCACG	CGTGCAATCTCGTCTGCTCGACGA
167	TCTTTGCCGCGTAACTGACTGCTT	AAGCAGTCAGTTACGCGGCAAAGA
168	TTTATGTGCCAAGGGGTTAACCGA	TCGGTTAACCCCTTGGCACATAAA
169	TGTTACTGTGGTTCACGGCAGTCC	GGACTGCCGTGAACCACAGTAACA
170	CGCGCCTCGCTAGACCTTTTATTG	CAATAAAAGGTCTAGCGAGGCGCG
171	ACAAATGCGTGAGAGCTCCCAACT	AGTTGGGAGCTCTCACGCATTTGT
172	CGCGCAGATTATAGACCCGAATGT	ACATTCGGGTCTATAATCTGCGCG
173	CAAATAACGCCGCTGAATCGGCGT	ACGCCGATTCAGCGGCGTTATTTG
174	CCTTCGTGCATCGGTGATGATGTT	AACATCATCACCGATGCACGAAGG
175	TGAACACGAGCAACACTCCAACGC	GCGTTGGAGTGTTGCTCGTGTTCA
176	CAGCAGATCCTTCGTAGCGGTCGT	ACGACCGCTACGAAGGATCTGCTG
177	GGAACCTGGTGAGTTGTGCCTCAT	ATGAGGCACAACTCACCAGGTTCC
178	TCATAAGCGACAATCGCGGGCTTA	TAAGCCCGCGATTGTCGCTTATGA
179	CCCAACGTCACTGAAGCTCACAGT	ACTGTGAGCTTCAGTGACGTTGGG
180	TGTCAGAGCCCGCGACTCAGACGG	CCGTCTGAGTCGCGGGCTCTGACA
181	TACACGAAGCCTCTCCGTGGTCCA	TGGACCACGGAGAGGCTTCGTGTA
182	CTCAGAAGTCCTCGGCGAACTGGG	CCCAGTTCGCCGAGGACTTCTGAG
183	ATCCTTTTATCTACTCCGCGGCGA	TCGCCGCGGAGTAGATAAAAGGAT
184	AGGCGTGCAGCAACAGGATAAACC	GGTTTATCCTGTTGCTGCACGCCT
185	ACTCTCGAGGGAGTCTCTGGCACA	TGTGCCAGAGACTCCCTCGAGAGT
186	TTGCCAGGTCCATCGAGACCTGTT	AACAGGTCTCGATGGACCTGGCAA
187	TCCACTATAACTGCGGGTCCGTGT	ACACGGACCCGCAGTTATAGTGGA
188	GCCCAGTCGGCTCTAACAAGTTCG	CGAACTTGTTAGAGCCGACTGGGC
189	CGGAACGGATAATCGGCGTCAGGT	ACCTGACGCCGATTATCCGTTCCG
190	TAAAATAAGCGCCTGGCGGGAGGA	TCCTCCCGCCAGGCGCTTATTTTA
191	GCGCACTCGTGAAACCTTTCTCGC	GCGAGAAAGGTTTCACGAGTGCGC
192	AGTTTGCCAGGTACTGGCAAGTGC	GCACTTGCCAGTACCTGGCAAACT

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
193	ACAACGAGGGATGTCCAGCGGCAT	ATGCCGCTGGACATCCCTCGTTGT
194	TTCGCAGCACCCGCTAGGTACAGT	ACTGTACCTAGCGGGTGCTGCGAA
195	TAACCCGATTTTTGCGACTCTGCC	GGCAGAGTCGCAAAAATCGGGTTA
196	CGTCGCATTGCAAGCGTAGGCTTG	CAAGCCTACGCTTGCAATGCGACG
197	GAGCTGACGTCACCATCAGAGGAA	TTCCTCTGATGGTGACGTCAGCTC
198	GGAGGCTGGGGGTCGCGCTTAAGT	ACTTAAGCGCGACCCCCAGCCTCC
199	TTGTGGGAACCGCACTAGCTGGCT	AGCCAGCTAGTGCGGTTCCCACAA
200	CCCTCGCACTGTGTTCACCCTCTT	AAGAGGGTGAACACAGTGCGAGGG
201	TCATTGACTCGAATCCGCACAACG	CGTTGTGCGGATTCGAGTCAATGA
202	ACAGGGGTTGGCCTTCGTACGTAC	GTACGTACGAAGGCCAACCCCTGT
203	AGGCCGTGCAACATCACACAGGAT	ATCCTGTGTGATGTTGCACGGCCT
204	GGGCCGTGGTCACGTAATATTGGC	GCCAATATTACGTGACCACGGCCC
205	GCGCGGACATGAAACGACAAGGCC	GGCCTTGTCGTTTCATGTCCGCGC
206	CTTATTGGGTGCCGGTGTCGGATT	AATCCGACACCGGCACCCAATAAG
207	GGGGCGGTTACCAAAAAATCCGAT	ATCGGATTTTTTGGTAACCGCCCC
4	CCGTCGCATACCGGCTACGATCAA	TTGATCGTAGCCGGTATGCGACGG
5	ATGGCCGTGCTGGGGACAAGTCAA	TTGACTTGTCCCCAGCACGGCCAT
210	ACGAAAAAAGTGTGCGGATCCCCT	AGGGGATCCGCACACTTTTTTCGT
211	CCAAGTACACCGCACGCATGTTTA	TAAACATGCGTGCGGTGTACTTGG
212	ATCGTGCGTGGAGTGTCGCATCTA	TAGATGCGACACTCCACGCACGAT
213	TCCAGATACCGCCCCGAACTTTGA	TCAAAGTTCGGGGCGGTATCTGGA
214	TCTGCTGGCAGCACGTGAAGTGGC	GCCACTTCACGTGCTGCCAGCAGA
215	TTGAAATTGCTCTGCCGTCAGTCA	TGACTGACGGCAGAGCAATTTCAA
216	AGTCAGGCGAGATGTTCAGGCAGC	GCTGCCTGAACATCTCGCCTGACT
217	ACAAGCCGACGTTAAGCCCGCCCA	TGGGCGGGCTTAACGTCGGCTTGT
218	CCCTAATGAGGCCAGTAACCTGCA	TGCAGGTTACTGGCCTCATTAGGG
219	GTGAGACACACATCCCCTCCAATG	CATTGGAGGGGATGTGTGTCTCAC
220	CGACGGATGCAGAGTTCAGTGGTC	GACCACTGAACTCTGCATCCGTCG
221	CCCGCATGCCTGGCGGTATTACAA	TTGTAATACCGCCAGGCATGCGGG
222	TTAGCAAAGCGGCGCCGTTAGCAA	TTGCTAACGGCGCCGCTTTGCTAA
223	CCCGACACGGGTCAGCGTAATAAT	ATTATTACGCTGACCCGTGTCGGG
224	GCGACGGCCCTGAGGTATGTCGTC	GACGACATACCTCAGGGCCGTCGC
225	CAAAAGTGTGTTCCCTTGCGCTTG	CAAGCGCAAGGGAACACACTTTTG
226	TCTCGAAGCACAGCCCGGTTATTG	CAATAACCGGGCTGTGCTTCGAGA
227	ATGCTAACCGTTGGCCATGGAACT	AGTTCCATGGCCAACGGTTAGCAT
228	CTTGCGGAGTGTTAGCCCAGCGGT	ACCGCTGGGCTAACACTCCGCAAG
229	TGCTCCCTAGGCGCTCGGAGGAGT	ACTCCTCCGAGCGCCTAGGGAGCA

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
230	CCAATGCCTTTGAGTAAGCGATGG	CCATCGCTTACTCAAAGGCATTGG
231	AGCAGATAACGTCCCAATGACGCC	GGCGTCATTGGGACGTTATCTGCT
232	TTGACCATTACGTGTTGCGCCCAT	ATGGGCGCAACACGTAATGGTCAA
233	TCGCGTATTTGCGGAATTCGTCTG	CAGACGAATTCCGCAAATACGCGA
234	CTGCGTGTCAACAATGTCCCGCAG	CTGCGGGACATTGTTGACACGCAG
235	TCTGGTGCCACGCAAGGTCCACAG	CTGTGGACCTTGCGTGGCACCAGA
236	CTCCGGGAGGTCACTTAATTGCGG	CCGCAATTAAGTGACCTCCCGGAG
237	TTTTCGTGATTGCCCGGAGGAGGC	GCCTCCTCCGGGCAATCACGAAAA
238	TCGGGATGTAGCTGGGGCTACCGG	CCGGTAGCCCCAGCTACATCCCGA
239	CGAGCCAACGCAAACACGTCCTTG	CAAGGACGTGTTTGCGTTGGCTCG
240	GCAAAGCCTTTGTGGGGCGGTAGT	ACTACCGCCCCACAAAGGCTTTGC
241	ATTCGACCGGAAATGAGGTCTTCG	CGAAGACCTCATTTCCGGTCGAAT
242	TTCGCTTGCTGAGTTGGTCTGTTC	GAACAGAGCAACTCAGCAAGCGAA
243	CGCGTGAAGACCCCATTCCCGAGT	ACTCGGGAATGGGGTCTTCACGCG
244	AACCGTATTCGCGGTCACTTGTGG	CCACAAGTGACCGCGAATACGGTT
245	GGGGCCAACCGTTTCGAGGCGTAT	ATACGCCTCGAAACGGTTGGCCCC
246	TTCGGCTGGCAGTCCAAACGGCTT	AAGCCGTTTGGACTGCCAGCCGAA
247	GGGTGTGGTTAGAATGCACGGTTC	GAACCGTGCATTCTAACCACACCC
248	GCGAGGACCGAACTAGACAAACGG	CCGTTTGTCTAGTTCGGTCCTCGC
249	ACGCACGCGTGACCGAAGTTGCTG	CAGCAACTTCGGTCACGCGTGCGT
250	TAAAAGGTCGCTTTGAAAGGGGGA	TCCCCCTTTCAAAGCGACCTTTTA
251	TGCGATCGCTAACTGCTGGGACAA	TTGTCCCAGCAGTTAGCGATCGCA
252	GGAGGTATAAGCGGAGCGGCCTCA	TGAGGCCGCTCCGCTTATACCTCC
253	ATGCTGACATGTCGTGCACCTCGT	ACGAGGTGCACGACATGTCAGCAT
254	TGTGGTTAAAGCGTCCGTTCAACG	CGTTGAACGGACGCTTTAACCACA
255	CGTTCACACCGGCGTAAGCTGCGT	ACGCAGCTTACGCCGGTGTGAACG
256	CCTATCCCGGCGAGAACTTCTGTG	CACAGAAGTTCTCGCCGGGATAGG
257	GTCTGCACTCACGCAGCGGAGGGA	TCCCTCCGCTGCGTGAGTGCAGAC
258	GCACGAGTTGGTGCTCGGCAGATT	AATCTGCCGAGCACCAACTCGTGC
259	AACGTCGCACGACACACGTTCGTC	GACGAACGTGTGTCGTGCGACGTT
260	ATGCGCGCTTATCCTAGCATGGTC	GACCATGCTAGGATAAGCGCGCAT
261	TCACGTTTTCGTCTCGACATGAGG	CCTCATGTCGAGACGAAAACGTGA
262	TGTGCCTCATCCTTAGGATACGGC	GCCGTATCCTAAGGATGAGGCACA
263	AGGTGGTGTGGGTCAACCGCTTTA	TAAAGCGGTTGACCCACACCACCT
264	CTGGATCGAAGGGACTGCAAGCTC	GAGCTTGCAGTCCCTTCGATCCAG
265	TAGATCAACTCGCGTACGCATGGA	TCCATGCGTACGCGAGTTGATCTA
266	GATCCTGCGGAGAAGAGAGTGCAG	CTGCACTCTCTTCTCCGCAGGATC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
267	TACGTGTGGAGATGCCCCGAACCG	CGGTTCGGGGCATCTCCACACGTA
268	GCGCTATGTCAATCGTGGGCGTAG	CTACGCCCACGATTGACATAGCGC
269	AGCGAGGTTTCTAGCGTCGACACC	GGTGTCGACGCTAGAAACCTCGCT
270	ACCCAGGTTTTGCCGTTGTGGAAT	ATTCCACAACGGCAAAACCTGGGT
271	CCCTGTTAACGGCTGCGTAGTCTC	GAGACTACGCAGCCGTTAACAGGG
272	AGGCCGATTTCACCCGCCAATTGC	GCAATTGGCGGGTGAAATCGGCCT
273	GAGCCCTCACTCCTTGCCCTTTGA	TCAAAGGGCAAGGAGTGAGGGCTC
274	GGGTGGACATCCGCCTCGCAGTCA	TGACTGCGAGGCGGATGTCCACCC
275	GATGGCTGAGAACCGTGCTACGAT	ATCGTAGCACGGTTCTCAGCCATC
276	TCGACGTTAGGAGTGCTGCCAGAA	TTCTGGCAGCACTCCTAACGTCGA
277	CGAATGGGTCTGGACCTTGCATAG	CTATGCAAGGTCCAGACCCATTCG
278	GTGCACCAGACATTCGAACTCGGA	TCCGAGTTCGAATGTCTGGTGCAC
279	AGAGGCCCCGTATATCCCATCCAT	ATGGATGGGATATACGGGGCCTCT
280	AACGCCTGTTCAGAGCATCAGCGG	CCGCTGATGCTCTGAACAGGCGTT
281	AAGGCTCAACACGCCTATGTGCGC	GCGCACATAGGCGTGTTGAGCCTT
282	AGTCCGTGTTGCCAGATTGGCTCG	CGAGCCAATCTGGCAACACGGACT
283	ATGTCCCATGTAAAGACGCGTGTG	CACACGCGTCTTTACATGGGACAT
284	ATGGAGTCTGCTCACGCCCAAAGG	CCTTTGGGCGTGAGCAGACTCCAT
285	CGGCCTCCAACAAGGAGCACTAAC	GTTAGTGCTCCTTGTTGGAGGCCG
286	CAGAGCCGTGGCAACATTGCGAGC	GCTCGCAATGTTGCCACGGCTCTG
287	TCATTTGAATGAGGTGCGCACCGG	CCGGTGCGCACCTCATTCAAATGA
288	GACGTACCGGAAGCGCCGTATAAA	TTTATACGGCGCTTCCGGTACGTC
289	ATGCGAGCAATGGGATCCGGATTC	GAATCCGGATCCCATTGCTCGCAT
290	AGAGTGAGGCCTCCCTGACCAGTG	CACTGGTCAGGGAGGCCTCACTCT
291	CGCACCGTAAGTAGATTTGCCCGC	GCGGGCAAATCTACTTACGGTGCG
292	TGAACCTTTGAGCACGTCGTGCGC	GCGCACGACGTGCTCAAAGGTTCA
293	TCCGCCTTTTTGGTTACCTCGAAG	CTTCGAGGTAACCAAAAAGGCGGA
294	GAACGCCAACGGCACTAACACATC	GATGTGTTAGTGCCGTTGGCGTTC
295	CCGACAGCAGCCAAGACGTCCCAG	CTGGGACGTCTTGGCTGCTGTCGG
296	CATAAAAAAACCTGGGGCTCTGCG	CGCAGAGCCCCAGGTTTTTTTATG
297	TGCCAACTGTGCAGACCGGACTTA	TAAGTCCGGTCTGCACAGTTGGCA
298	GGCGAAAGAGCGAAACCGGCTCGT	ACGAGCCGGTTTCGCTCTTTCGCC
299	GGGATGCGTATTTTAGCGAACACG	CGTGTTCGCTAAAATACGCATCCC
300	TGGGATTCAGCGACCAGTACGCGA	TCGCGTACTGGTCGCTGAATCCCA
301	CCCGATATTCGCCCGGCCTATTCG	CGAATAGGCCGGGCGAATATCGGG
302	CGAGAAGATGCCTCACGCAACCAA	TTGGTTGCGTGAGGCATCTTCTCG
303	AACCTTGACCCGTGGATGACGCTA	TAGCGTCATCCACGGGTCAAGGTT

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
6	TTGCAACGGGCTGGTCAACGTCAA	TTGACGTTGACCAGCCCGTTGCAA
7	CGCATAGGTTGCCGATTTCGTCAA	TTGACGAAATCGGCAACCTATGCG
306	GCTTCCGGATGAACGGGATGGTTG	CAACCATCCCGTTCATCCGGAAGC
307	CCCTCCATGTTCTTCGAACGGTTT	AAACCGTTCGAAGAACATGGAGGG
308	TTGATGGGCGGCAATGCTCTTGCT	AGCAAGAGCATTGCCGCCCATCAA
309	ATTGTGAGATGCGCCAAATTCCCC	GGGGAATTTGGCGCATCTCACAAT
310	TCAGCACAGCCAGACGGTCAACTT	AAGTTGACCGTCTGGCTGTGCTGA
311	ACTCCACTCCTCGGTGGCAAACTA	TAGTTTGCCACCGAGGAGTGGAGT
312	TCTGGGCATGCCTGGACGGAGACG	CGTCTCCGTCCAGGCATGCCCAGA
313	TCTCAACTCCGGTACGACGAAACA	TGTTTCGTCGTACCGGAGTTGAGA
314	TTGCGTGGTCAAAGGCGCAACGTG	CACGTTGCGCCTTTGACCACGCAA
315	AGACAGCGATCCGCGGCTCATGAT	ATCATGAGCCGCGGATCGCTGTCT
316	CGCGTCTCTAACTGAGAGCAGCCA	TGGCTGCTCTCAGTTAGAGACGCG
317	AGGCGCACATGTACGGACATTCAG	CTGAATGTCCGTACATGTGCGCCT
318	GATGAGTGGCACGTCGGTGTGTAA	TTACACACCGACGTGCCACTCATC
319	TGATCCATATTGTCGGACGTTGCG	CGCAACGTCCGACAATATGGATCA
320	ACCTGCCGGGAGTTCATAGGCTAG	CTAGCCTATGAACTCCCGGCAGGT
321	AGCATTGGCGTTTTTCCGCAACGA	TCGTTGCGGAAAAACGCCAATGCT
322	GGTAATATTCAGCGCGACCGCTCA	TGAGCGGTCGCGCTGAATATTACC
323	ATAGCGTACGACGAGGTGACGCGC	GCGCGTCACCTCGTCGTACGCTAT
324	TAGGTCACGATGCGTTTGACGCTA	TAGCGTCAAACGCATCGTGACCTA
325	ACTGCCCGTACCTCTGGTTCTGGC	GCCAGAACCAGAGGTACGGGCAGT
326	CCTTTGGCCTGAAGTTGTCGTAGC	GCTACGACAACTTCAGGCCAAAGG
327	GTGCCCCACGAGCGTATCGTTGTA	TACAACGATACGCTCGTGGGGCAC
328	AGGCGCTACGTGGGCCTGGAGCAA	TTGCTCCAGGCCCACGTAGCGCCT
329	GGGTGCTACCATTGCATTAGTCCG	CGGACTAATGCAATGGTAGCACCC
330	ACCACGCGCGTACGTGTAACCGAG	CTCGGTTACACGTACGCGCGTGGT
331	CCATGATGCATTGGGTGCATTTAG	CTAAATGCACCCAATGCATCATGG
332	GGTCCGGCCCTACGAAACGTTCGA	TCGAACGTTTCGTAGGGCCGGACC
333	CCGTGTGGCTGGAGATTCGTGTGA	TCACACGAATCTCCAGCCACACGG
334	GTTAGGGCGACGCATATTGGCACA	TGTGCCAATATGCGTCGCCCTAAC
335	GGGTCAGTCAGGTGCGTTAGGATC	GATCCTAACGCACCTGACTGACCC
336	GCCGTGAAGTCGAATGCAGATCGA	TCGATCTGCATTCGACTTCACGGC
337	GCCACCACCCAGTGCATTCAGGTA	TACCTGAATGCACTGGGTGGTGGC
338	GAGCTTAGTTTGCGGTCATCGGGC	GCCCGATGACCGCAAACTAAGCTC
339	TGTTTGCCGCCATTAGGGAGTAAC	GTTACTCCCTAATGGCGGCAAACA
340	GCTCCGCTGGATGTGCCGGTTTAG	CTAAACCGGCACATCCAGCGGAGC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
341	CGGTAGCATGCGAGATCCCTGTTA	TAACAGGGATCTCGCATGCTACCG
342	CTACGCTCTACCAGTTGCCTGCGA	TCGCAGGCAACTGGTAGAGCGTAG
343	GTGCCTCCTGCTGTATTTGCCAAG	CTTGGCAAATACAGCAGGAGGCAC
344	TTGCGACTCGACTTGGACGAGTAG	CTACTCGTCCAAGTCGAGTCGCAA
345	TCTGGGAGCTGTTTACTCCAGCCA	TGGCTGGAGTAAACAGCTCCCAGA
346	TGGACGCGGAACTCCCTTTAGCAT	ATGGTAAAGGGAGTTCCGCGTGCA
347	TGGCAGCAAATGAATCGAAAGCAC	GTGCTTTCGATTCATTTGCTGCCA
348	AACTGGTGACGCGGTACAGCGAAG	CTTCGCTGTACCGCGTCACCAGTT
349	AGACGATTACGCTGGACGCCGTCG	CGACGGCGTCCAGCGTAATCGTCT
350	ATGCCCTCCTTCATGGAAAGGGTT	AACCCTTTCCATGAAGGAGGGCAT
351	ATTCTCGGAGCGTATGCGCCAGAA	TTCTGGCGCATACGCTCCGAGAAT
352	ATAGCGGAGTTTGGGTACGCGAAC	GTTCGCGTACCCAAACTCCGCTAT
353	ACCTACGCATACCGCTTGGCGAGG	CCTCGCCAAGCGGTATGCGTAGGT
354	GATTACCTGAATGGCCAAGCGAGC	GCTCGCTTGGCCATTCAGGTAATC
355	CCTGTTAGCATCACGGCGCTTAGG	CCTAAGCGCCGTGATGCTAACAGG
356	CGGAATGATGCGCTCGACAACGCT	AGCGTTGTCGAGCGCATCATTCCG
357	TGAGAGAGGCGTTGGTTAAGGCAA	TTGCCTTAACCAACGCCTCTCTCA
358	AAGCAGGCGAAGGGATACTCCTCG	CGAGGAGTATCCCTTCGCCTGCTT
359	TCACGACAGACGGGCCGAGATTAC	GTAATCTCGGCCCGTCTGTCGTGA
360	AAGCAATTTGGCCTCGTTTTGTGA	TCACAAAACGAGGCCAAATTGCTT
361	GCTGGTTGCGGTAGGATCGCATAT	ATATGCGATCCTACCGCAACCAGC
362	TTGTGAATCCGTTCTGTCCCCGAC	GTCGGGGACAGAACGGATTCACAA
363	TGGGCTCCTCTGAGGCGAGATGGC	GCCATCTCGCCTCAGAGGAGCCCA
364	GGATAGAGTGAATCGACCGGCAAC	GTTGCCGGTCGATTCACTCTATCC
365	TGCACCGAACGTGCACGAGTAATT	AATTACTCGTGCACGTTCGGTGCA
366	GCCAGTATTCTCGGGTGTTGGACG	CGTCCAACACCCGAGAATACTGGC
367	TCGCTACCTAAGACCGGGCCATAC	GTATGGCCCGGTCTTAGGTAGCGA
368	TGGCATTGACGAGCAGCAGTCAGT	ACTGACTGCTGCTCGTCAATGCCA
369	CGCGTCCCAGCGCCCTTGGAGTAT	ATACTCCAAGGGCGCTGGGACGCG
370	ATGAAGCCTACCGGGCGACTTCGT	ACGAAGTCGCCCGGTAGGCTTCAT
371	CCAGACAGATGGCCTGGAACCATG	CATGGTTCCAGGCCATCTGTCTGG
372	TGGCGTGGGACCATCTCAAAGCTA	TAGCTTTGAGATGGTCCCACGCCA
373	CCGCATGGGAACACGTGTCAAGGT	ACCTTGACACGTGTTCCCATGCGG
374	GCCCACTCGTCAGCTGGACGTAAT	ATTACGTCCAGCTGACGAGTGGGC
375	ATTACGGTCGTGATCCAGAAAGCG	CGCTTTCTGGATCACGACCGTAAT
376	TGCGAGGTGAGCACCTACGAGAGA	TCTCTCGTAGGTGCTCACCTCGCA
377	GGGCCGCATTCTTGATGTCCATTC	GAATGGACATCAAGAATGCGGCCC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
378	CCTCGGATGTGGGCTCTCGCCTAG	CTAGGCGAGAGCCCACATCCGAGG
379	TAGGCATGTTGGCGTGAGCGCTAT	ATAGCGCTCACGCCAACATGCCTA
380	CGATACGAACGAGGATGTCCGCCT	AGGCGGACATCCTCGTTCGTATCG
381	TACGCCGGTTAGCACGGTGCGCTA	TAGCGCACCGTGCTAACCGGCGTA
382	CATACGATGTCCGGGCCGTGTCGC	GCGACACGGCCCGGACATCGTATG
383	ATCCGCAGTTGTATGGCGCGTTAT	ATAACGCGCCATAGAACTGCGGAT
384	GGGTAAGGGACAAAGATGGGATGG	CCATCCCATCTTTGTCCCTTACCC
385	ATTGGAGTGTTTTGGTGAATCCGC	GCGGATTCACCAAAACACTCCAAT
386	GAACCGAGCCAACGTATGGACACG	CGTGTCCATACGTTGGCTCGGTTC
387	GCCGTCAAGCTTAAGGTTTTGGGC	GCCCAAAACCTTAAGCTTGACGGC
388	ACCTGCTTTTGGGTGGGTGATATG	CATATCACCCACCCAAAAGCAGGT
389	AATCGTGGGCGCAGCAAACGTATA	TATACGTTTGCTGCGCCCACGATT
390	GTCGCCGGATTGCTCAGTATAAGC	GCTTATACTGAGCAATCCGGCGAC
391	ACCCGTCGATGCTTCCTCCTCAGA	TCTGAGGAGGAAGCATCGACGGGT
392	ATCCGGGTGGGCGATACAAGAGAT	ATCTCTTGTATCGCCCACCCGGAT
393	TTCCGCATGAGTCAGCTTTGAAAA	TTTTCAAAGCTGACTCATGCGGAA
394	GCAAAGTCCCACTGGCAAGCCGAT	ATCGGCTTGCCAGTGGGACTTTGC
395	CGACCTCGGCTTCATCGTACACAT	ATGTGTACGATGAAGCCGAGGTCG
396	CTCATGAGCGCAGTTGTGCGTGAG	CTCACGCACAACTGCGCTCATGAG
397	CAGATGAAGGATCCACGGCCGGAG	CTCCGGCCGTGGATCCTTCATCTG
398	TCAAAGGCTCTTGGATACAGCCGT	ACGGCTGTATCCAAGAGCCTTTGA
399	TCCGCTAATTTCCAATCAGGGCTC	GAGCCCTGATTGGAAATTAGCGGA
8	CCGTTTGCGGTCGTCCTTGCTCAA	TTGAGCAAGGACGACCGCAAACGG
9	TTCGCTTTCGTGGCTGCACTTCAA	TTGAAGTGCAGCCACGAAAGCGAA
402	CTTAGTTGGGGCGCGGTATCCAGA	TCTGGATACCGCGCCCCAACTAAG
403	GCTCTAATGCCGTGGAGTCGGAAC	GTTCCGACTCCACGGCATTAGAGC
404	CCGATTACAAATTGACTGACCGCA	TGCGGTCAGTCAATTTGTAATCGG
405	AGACGTACGTGAGCCTCCCGTGTC	GACACGGGAGGCTCACGTACGTCT
406	AATGGAGCGATACGATCCAACGCA	TGCGTTGGATCGTATCGCTCCATT
407	GGAGGCGCTGTACTGATAGGCGTA	TACGCCTATCAGTACAGCGCCTCC
408	TGTTTTTGAATTGACCACACGGGA	TCCCGTGTGGTCAATTCAAAAACA
409	CATGTCTGGATGCGCTCAATGAAG	CTTCATTGAGCGCATCCAGACATG
410	GCCCGCTAATCCGACACCCAGTTT	AAACTGGGTGTCGGATTAGCGGGC
411	CCATTGACAGGAGAGCCATGAGCC	GGCTCATGGCTCTCCTGTCAATGG
412	GAATCACCGAATCACCGACTCGTT	AACGAGTCGGTGATTCGGTGATTC
413	AACCAGCCGCAGTAGCTTACGTCG	CGACGTAAGCTACTGCGGCTGGTT
414	TTTTCTGAGGGACACGCGGGCGTT	AACGCCCGCGTGTCCCTCAGAAAA

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
415	GGTGCTCCGTTTGATCGATCCTCC	GGAGGATCGATCAAACGGAGCACC
416	CCGCTTAGGCCATACTCTGAGCCA	TGGCTCAGAGTATGGCCTAAGCGG
417	TAAGACATACCGACGCCCTTGCCT	AGGCAAGGGCGTCGGTATGTCTTA
418	GTTCCCGACGCCAGTCATTGAGAC	GTCTCAATGACTGGCGTCGGGAAC
419	TAAAAGTTTCGCGGAGGTCGGGCT	AGCCCGACCTCCGCGAAACTTTTA
420	CGGTCCAGACGAGCTGAGTTCGGC	GCCGAACTCAGCTCGTCTGGACCG
421	CGGCGTAGCGGCTACGGACTTAAA	TTTAAGTCCGTAGCCGCTACGCCG
422	GCTTGGATGCCCATGCGGCAAGGT	ACCTTGCCGCATGGGCATCCAAGC
423	AGCGGGATCCCAGAGTTTCGAAAA	TTTTCGAAACTCTGGGATCCCGCT
424	GAGCTTGAGAGCGAGGTCATCCTC	GAGGATGACCTCGCTCTCAAGCTC
425	GCATCGGCCGTTTTGACCATATTC	GAATATGGTCAAAACGGCCGATGC
426	CATAGCGCTGCACGTTTCGACCGC	GCGGTCGAAACGTGCAGCGCTATG
427	ACCCGACAACCACCAATTCAAAAA	TTTTTGAATTGGTGGTTGTCGGGT
428	GCGAACACTCATAAGAGCGCCCTG	CAGGGCGCTCTTATGAGTGTTCGC
429	CCGCCGAGTGTAGAGAGACTCCGA	TCGGAGTCTCTCTACACTCGGCGG
430	GACATCGGGAGCCGGAAACATGAG	CTCATGTTTCCGGCTCCCGATGTC
431	TCGTGTAGACTCGGCGACAGGCGT	ACGCCTGTCGCCGAGTCTACACGA
432	ATGCGCATATACTGACTGCGCAGG	CCTGCGCAGTCAGTATATGCGCAT
433	ACAAGCGAACCCGAGTTTTGATGA	TCATCAAAACTCGGGTTCGCTTGT
434	GCATGAGACTCCGCGAAGACATGT	ACATGTCTTCGCGGAGTCTCATGC
435	TCCTACATGTCGCGTCACGATCAC	GTGATCGTGACGCGACATGTAGGA
436	GACCGATCGCGAAGTCGTACACAT	ATGTGTACGACTTCGCGATCGGTC
437	GTCGCCAGGACTGGGCCGATGTGA	TCACATCGGCCCAGTCCTGGCGAC
438	ACCGATAAGACTTGCATCCGAACG	CGTTCGGATGCAAGTCTTATCGGT
439	TCCATAACCAGTCCGAAGTGCCGG	CCGGCACTTCGGACTGGTTATGGA
440	ACGCGCCCTGCATCTCGTATTTAA	TTAAATACGAGATGCAGGGCGCGT
441	AGACCGCATCAATTGGCGCGTACC	GGTACGCGCCAATTGATGCGGTCT
442	AGAGGCTTGGCAAGTAGGGACCCT	AGGGTCCCTACTTGCCAAGCCTCT
443	GCAATGGACGCCAGACGATACCGG	CCGGTATCGTCTGGCGTCCATTGC
444	GCTGGACTTAGTCGTGTTCGGCGG	CCGCCGAACACGACTAAGTCCAGC
445	AGGCATCGTGCCGGATTGCTCCCT	AGGGAGCAATCCGGCACGATGCCT
446	TGCGCATGTCGACGTTGAACAAAG	CTTTGTTCAACGTCGACATGCGCA
447	TTCGGGTCACATCCGATGCCATAC	GTATGGCATCGGATGTGACCCGAA
448	ACCCATCGCCGGAAAGCGATGTTG	CAACATCGCTTTCCGGCGATGGGT
449	AAGCGCTGACTCGGCTAAGAATCA	TGATTCTTAGCCGAGTCAGCGCTT
450	ACTTCCAAGTCCTTGACCGTCCGA	TCGGACGGTCAAGGACTTGGAAGT
451	TCTCAATATTCCCGTAGTCGCCCA	TGGGCGACTACGGGAATATTGAGA

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
452	AACAGTTCCTCTTTTTCCTGGCGC	GCGCCAGGAAAAAGAGGAACTGTT
453	CGTCCTCCATGTTGTCACGAACAG	CTGTTCGTGACAACATGGAGGACG
454	TGCGCAGACCTACCTGTCTTTGCT	AGCAAAGACAGGTAGGTCTGCGCA
455	ATGGACGGCTTCGCAGTCCTCCTT	AAGGAGGACTGCGAAGCCGTCCAT
456	TGAACGCTTTCTATGGGCCACGTA	TACGTGGCCCATAGAAAGCGTTCA
457	TGAACCCTGCCGCGAGCGATAACC	GGTTATCGCTCGCGGCAGGGTTCA
458	GTTCTTGCGCGATGAATCAGGACC	GGTCCTGATTCATCGCGCAAGAAC
459	AGGGTACGTGTCGCAGCTTCGCGT	ACGCGAAGCTGCGACACGTACCCT
460	ACCCTTGCTCCGCCATGTCTCTCA	TGAGAGACATGGCGGAGCAAGGGT
461	GGGACAAGGATTGAAGCTGGCGTC	GACGCCAGCTTCAATCCTTGTCCC
462	TGTCGTTGCTCCCGAGTACCATTG	CAATGGTACTCGGGAGCAACGACA
463	GTTGTCCGAGACGTTTGTGTCAGC	GCTGACACAAACGTCTCGGACAAC
464	GCTGGTGAACACTCACGAACCGCT	AGCGGTTCGTGAGTGTTCACCAGC
465	GCAGACAGGGCAAATCGGTGCAAA	TTTGCACCGATTTGCCCTGTCTGC
466	CCCATCACAACGAGTGGCGACTTT	AAAGTCGCCACTCGTTGTGATGGG
467	GCTTCTACAGCTGGCGTGCTAGCG	CGCTAGCACGCCAGCTGTAGAAGC
468	GAATGTGTGCCGACCATTCTAGCC	GGCTAGAATGGTCGGCACACATTC
469	CCAGCGGAAGTTAGAGCTCTGTGG	CCACAGAGCTCTAACTTCCGCTGG
470	TTTTTACCGACCACTCCATGTCGG	CCGACATGGAGTGGTCGGTAAAAA
471	GCGGCTATGTGATGACGGCCTAGC	GCTAGGCCGTCATCACATAGCCGC
472	AGTACACGGGCGTGTTAGCGCTCC	GGAGCGCTAACACGCCCGTGTACT
473	TCCTGTGTGGTGGCGCACTCCCAC	GTGGGAGTGCGCCACCACACAGGA
474	CCAACTAACCAATCGCGCGGATGA	TCATCCGCGCGATTGGTTAGTTGG
475	AGTGAGTGACCAAGGCAGGAGCAA	TTGCTCCTGCCTTGGTCACTCACT
476	CATCTTTCGCGGAGTTTATTGCGG	CCGCAATAAACTCCGCGAAAGATG
477	CTTCGTCCGGTTAGTGCGACAGCA	TGCTGTCGCACTAACCGGACGAAG
478	CTCACGAAAACGTGGGCCCGAAAT	ATTTCGGGCCCACGTTTTCGTGAG
479	CGCAGCAGCTGAACTCTAGCATTG	CAATGCTAGAGTTCAGCTGCTGCG
480	AGGAGACATACGCCCAAATGGTGC	GCACCATTTGGGCGTATGTCTCCT
481	ATTGAGAACTCGTGCGGGAGTTTG	CAAACTCCCGCACGAGTTCTCAAT
482	CTCTTTGTAGGCCCAGGAGGAGCA	TGCTCCTCCTGGGCCTACAAAGAG
483	GCCGCAGGGTCGATAATTGGTCTA	TAGACCAATTATCGACCCTGCGGC
484	AAACGCCGCCCTGAGACTATTGGG	CCCAATAGTCTCAGGGCGGCGTTT
485	CTGAGTTGCCTGGAACGTTGGACT	AGTCCAACGTTCCAGGCAACTCAG
486	CGGATGGGTTGCAGAGTATGGGAT	ATCCCATACTCTGCAACCCATCCG
487	CTGACCTTTGGGGGTTAGTGCGGT	ACCGCACTAACCCCCAAAGGTCAG
488	GGAAATGAGAACCTTACCCCAGCG	CGCTGGGGTAAGGTTCTCATTTCC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
489	AACGCATCGTCCGTCAACTCATCA	TGATGAGTTGACGGACGATGCGTT
490	TGGAGAGAGACTTCGGCCATTGTT	AACAATGGCCGAAGTCTCTCTCCA
491	TTGCGCTCATTGGATCTTGTCAGG	CCTGACAAGATCCAATGAGCGCAA
492	AGCGCGTTAAAGCACGGCAACATT	AATGTTGCCGTGCTTTAACGCGCT
493	AGCCAGTAAACTGTGGGCGGCTGT	ACAGCCGCCCACAGTTTACTGGCT
494	CGACTGATGTGCAACCAGCAGCTG	CAGCTGCTGGTTGCACATCAGTCG
495	GGTTGCTCATACGACGAGCGAGTG	CACTCGCTCGTCGTATGAGCAACC
10	GTCCAACGCGCAACTCCGATTCAA	TTGAATCGGAGTTGCGCGTTGGAC
11	TTGCCGCACCGTCCGTCATCTCAA	TTGAGATGACGGACGGTGCGGCAA
498	AGAACCTCCGCGCCTCCGTAGTAG	CTACTACGGAGGCGCGGAGGTTCT
499	AAAGGAGCTTTCGCCCAACGTACC	GGTACGTTGGGCGAAAGCTCCTTT
500	AGTGATTGTGCCACTCCACAGCTC	GAGCTGTGGAGTGGCACAATCACT
501	GCGATCGTCGAGGGTTGAGCTGAA	TTCAGCTCAACCCTCGACGATCGC
502	GGGAGACAGCCATTATGGTCCTCG	CGAGGACCATAATGGCTGTCTCCC
503	GAGACGCTGTCACTCCGGCAGAAC	GTTCTGCCGGAGTGACAGCGTCTC
504	CCACCGGTCGCTTAAGATGCACTT	AAGTGCATCTTAAGCGACCGGTGG
505	CGGCATAACGTCCAGTCCTGGGAC	GTCCCAGGACTGGACGTTATGCCG
506	AAGCGGAACGGGTTATACCGAGGT	ACCTCGGTATAACCCGTTCCGCTT
507	TGCACACTAGGTCCGTCGCTTGAT	ATCAAGCGACGGACCTAGTGTGCA
508	AGGGAACCGCGTTCAAACTCAGTT	AACTGAGTTTGAACGCGGTTCCCT
509	GAATTACAACCACCCGCTCGTGTT	AACACGAGCGGGTGGTTGTAATTC
510	TTCAGTGCTCACGAAGCATGGATT	AATCCATGCTTCGTGAGCACTGAA
511	TTAGTTTGGCGTTGGGACTTCACC	GGTGAAGTCCCAACGCCAAACTAA
512	AATGCGACCTCGACGAGCCTCATA	TATGAGGCTCGTCGAGGTCGCATT
513	CCGAAACCGTTAACGTGGCGCACA	TGTGCGCCACGTTAACGGTTTCGG
514	TAAAGTAACAAGGCGACCTCCCGC	GCGGGAGGTCGCCTTGTTACTTTA
515	TAATGATTTTAGTCGCGGGGTGGG	CCCACCCCGCGACTAAAATCATTA
516	GGCTACTCTAAGTGCCCGCTCAGG	CCTGAGCGGGCACTTAGAGTAGCC
517	TGGCGGACGACTCAATATCTCACG	CGTGAGATATTGAGTCGTCCGCCA
518	GGGCGTTAGGCGTAATAGACCGTC	GACGGTCTATTACGCCTAACGCCC
519	GCCACCTTTAGACGGCGGCTCTAG	CTAGAGCCGCCGTCTAAAGGTGGC
520	GAGATGTGTAAACGTGCAGGCACC	GGTGCCTGCACGTTTACACATCTC
521	TAGCTCGTGGCCCTCCAAGCGTGT	ACACGCTTGGAGGGCCACGAGCTA
522	GTGTCGGCGCTATTTGGCCTTACC	GGTAAGGCCAAATAGCGCCGACAC
523	CCAGGGAAGCAACTGGTTGCCATT	AATGGCAACCAGTTGCTTCCCTGG
524	TTCCGAAACTAAGCCAGAACCGCT	AGCGGTTCTGGCTTAGTTTCGGAA
525	GCAAACCCGGTAACCCGAGAGTTC	GAACTCTCGGGTTACCGGGTTTGC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
526	GCAAATGGCGTCATGCACGAACGT	ACGTTCGTGCATGACGCCATTTGC
527	AGTACTTTCGCGCCCAGTTTAGGG	CCCTAAACTGGGCGCGAAAGTACT
528	AAGATCTGCGAGGCATCCCGGCTT	AAGCCGGGATGCCTCGCAGATCTT
529	GCAAGTGTATCGCACAGTGCGATT	AATCGCACTGTGCGATACACTTGC
530	CCGACAAGGCCTCAATTCATTCTG	CAGAATGAATTGAGGCCTTGTCGG
531	GTCTCGTCTCAACTTTAAGGCGCG	CGCGCCTTAAAGTTGAGACGAGAC
532	ATCCAGAGATCCGTTTTGCAGCGT	ACGCTGCAAAACGGATCTCTGGAT
533	GTCACCAGGAGGGAAGTTTCACCC	GGGTGAAACTTCCCTCCTGGTGAC
534	TTCCGTCAGGCGGATCAACGGAAT	ATTCCGTTGATCCGCCTGACGGAA
535	ATGCCGGACACGCATTACACAGGC	GCCTGTGTAATGCGTGTCCGGCAT
536	TGGGCCGCTTGGCGCTTTCATAGA	TCTATGAAAGCGCCAAGCGGCCCA
537	CCTAGCGCGAGCTTTACTGACCAG	CTGGTCAGTAAAGCTCGCGCTAGG
538	TTGGCCAGGAATATGGTCTCGAGA	TCTCGAGACCATATTCCTGGCCAA
539	GTCTGCGGCCGACTTGCTATGCAT	ATGCATAGCAAGTCGGCCGCAGAC
540	AACTTGCTCATTCTCAAGCCGACG	CGTCGGCTTGAGAATGAGCAAGTT
541	ACGTCAGCGATTGTGGCGAAATAT	ATATTTCGCCACAATCGCTGACGT
542	ACGGCCTGCGTCAGCACATGCATC	GATGCATGTGCTGACGCAGGCCGT
543	ATACCTCCGCAGAACCATTCCGTT	AACGGAATGGTTCTGCGGAGGTAT
544	AGTTCGCGGTCCCACGATTCACTT	AAGTGAATCGTGGGACCGCGAACT
545	TGCTCAATTTGTGCAGAAAACGCC	GGCGTTTTCTGCACAAATTGAGCA
546	TTATCGCGAGAGACGACCGTGTCC	GGACACGGTCGTCTCTCGCGATAA
547	GACGCGACGTGAGTAGTGGAAGCG	CGCTTCCACTACTCACGTCGCGTC
548	ATGGTAGGGGCATTGGGCTTTCCT	AGGAAAGCCCAATGCCCCTACCAT
549	CCAAATATAGCCGCGCGGAGACAT	ATGTCTCCGCGCGGCTATATTTGG
550	GCAAACCCTGATTGAATCGTGCCC	GGGCACGATTCAATCAGGGTTTGC
551	TAGCGTCTTGCGTGAAACCATGGG	CCCATGGTTTCACGCAAGACGCTA
552	CCACCCCGACAGCGCTGGACTCTT	AAGAGTCCAGCGCTGTCGGGGTGG
553	ACGAGCACTGAAGGCTGCTTTACG	CGTAAAGCAGCCTTCAGTGCTCGT
554	CATATCAGCGTCGTCTAGCTCGCG	CGCGAGCTAGACGACGCTGATATG
555	TGATCCCGGACCGGCTAGACTAAT	ATTAGTCTAGCCGGTCCGGGATCA
556	GGCCCCGACACTACAGGGTAATCA	TGATTACCCTGTAGTGTCGGGGCC
557	GGCTCCAGGGCGAGATTATGAATG	CATTCATAATCTCGCCCTGGAGCC
558	CAAAATCCGATGGGCGGAAAATTA	TAATTTTCCGCCCATCGGATTTTG
559	CACAGGCGCATAGGGAGCAAGCTA	TAGCTTGCTCCCTATGCGCCTGTG
560	TAGCTATTGCCCCGATGGGCTACT	AGTAGCCCATCGGGGCAATAGCTA
561	TGGTACGCGGTCCATAGCAAGTCG	CGACTTGCTATGGACCGCGTACCA
562	GACGCTGTGGCTCGGAAACTGTTC	GAACAGTTTCCGAGCCACAGCGTC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
563	CCTGGGTTCGCCGCGTGGTAACTG	CAGTTACCACGCGGCGAACCCAGG
564	TTCCCGCGTAGCCCAACAGCTATA	TATAGCTGTTGGGCTACGCGGGAA
565	TTCGCGGATTGCTGCCGCATAACA	TGTTATGCGGCAGCAATCCGCGAA
566	AAAAATGGCACCGAAGTTGAGGCA	TGCCTCAACTTCGGTGCCATTTTT
567	CATTCCGCGCGAGTTGAAATCCAG	CTGGATTTCAACTCGCGCGGAATG
568	ACGCACGTTTTTTGGCACGGTTAA	TTAACCGTGCCAAAAAACGTGCGT
569	TGTCCATGACGTCGTTTCTCTGGT	ACCAGAGAAACGACGTCATGGACA
570	TCTCAGTCGGACTCGTATGCCAGA	TCTGGCATACGAGTCCGACTGAGA
571	CTCCAAACGCACACATCAAGCATC	GATGCTTGATGTGTGCGTTTGGAG
572	TTCAACCAAGCGGGGTGTTCGTGA	TCACGAACACCCCGCTTGGTTGAA
573	GGTGTCGGAGGGTGGTGACCTCGA	TCGAGGTCACCACCCTCCGACACC
574	AGCGCTTTTGGTCATGATTTGCAA	TTGCAAATCATGACCAAAAGCGCT
575	CCGAGGACTTACGTCTGCCCAGGA	TCCTGGGCAGACGTAAGTCCTCGG
576	GCCCAATCCAGTTCTTATGCGCCC	GGGCGCATAAGAACTGGATTGGGC
577	CGGGTTAACCCACGCAAGTTATGA	TCATAACTTGCGTGGGTTAACCCG
578	TGATTAGCGCTCAATACACGCGTG	CACGCGTGTATTGAGCGCTAATCA
579	AAGGGCAGACCTTTGGTTCGACTG	CAGTCGAACCAAAGGTCTGCCCTT
580	GCGCCACAAGATTCACATGTCATT	AATGACATGTGAATCTTGTGGCGC
581	GCCATGTTCAAGGGCCTTTCGAAG	CTTCGAAAGGCCCTTGAACATGGC
582	CGCGGTGTTTTGTCTAGGTGCCGG	CCGGCACCTAGACAAAACACCGCG
583	CAACATTGTGGTGGCACTCCATCC	GGATGGAGTGCCACCACAATGTTG
584	CGATACGCGCCGGTTTGTTAAATC	GATTTAACAAACCGGCGCGTATCG
585	GGCTATAAACGTGCGGACTGCTCC	GGAGCAGTCCGCACGTTTATAGCC
586	TGGGTAAATCACTATTGCGCGGTT	AACCGCGCAATAGTGATTTACCCA
587	GTCTTCATCGGCCCGCGCAAGCTA	TAGCTTGCGCGGGCCGATGAAGAC
588	GCGACACACCCTGTACTCTGATGC	GCATCAGAGTACAGGGTGTGTCGC
589	GTAGCAGGGTCCGCAAGACCAAGC	GCTTGGTCTTGCGGACCCTGCTAC
590	TCGCCAACGCAGGGTAACTGCCAT	ATGGCAGTTACCCTGCGTTGGCGA
591	ACTCCGAAGCTTCGAGCGGCACGA	TCGTGCCGCTCGAAGCTTCGGAGT
12	CATCGTCCCTTTCGATGGGATCAA	TTGATCCCATCGAAAGGGACGATG
13	GCACGGGAGCTGACGACGTGTCAA	TTGACACGTCGTCAGCTCCCGTGC
594	ATCATCCCACGGCAGAGTGAAGAG	CTCTTCACTCTGCCGTGGGATGAT
595	CGCTGGACTGGCCTATCCGAGTCG	CGACTCGGATAGGCCAGTCCAGCG
596	CGGTCTCAGCAACACTGTCGCAAA	TTTGCGACAGTGTTGCTGAGACCG
597	CGAACGTTCTCCGATGTAATGGCC	GGCCATTACATCGGAGAACGTTCG
598	ATACCGTGCGACAAGCCCCTCTGA	TCAGAGGGGCTTGTCGCACGGTAT
599	AGCTCATTCCCGAGACGGAACACC	GGTGTTCCGTCTCGGGAATGAGCT

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
600	TTTCATGCGGCCGTTGCAAATCAT	ATGATTTGCAACGGCCGCATGAAA
601	ACTCGAACGGACGTTCAATTCCCA	TGGGAATTGAACGTCCGTTCGAGT
602	CTGCATGGTGTGGGTGAGACTCCC	GGGAGTCTCACCCACACCATGCAG
603	CCGCGAGTGTGGATGGCGTGTTGA	TCAACACGCCATCCACACTCGCGG
604	AATGTGTCGGTCCTAAGCCGGGTG	CACCCGGCTTAGGACCGACACATT
605	TAAGACGAGCCTGCACAGCTTGCG	CGCAAGCTGTGCAGGCTCGTCTTA
606	GGCGTGGGAGGATAAGACGATGTC	GACATCGTCTTATCCTCCCACGCC
607	TGCTCCATGTTAGGAACGCACCAC	GTGGTGCGTTCCTAACATGGAGCA
608	CGGTGTTGGTCGGACTGACGACTG	CAGTCGTCAGTCCGACCAACACCG
609	CCGCGCGTATCTATCAGATCTGGG	CCCAGATCTGATAGATACGCGCGG
610	AAAGCATGCTCCACCTGGAGCGAG	CTCGCTCCAGGTGGAGCATGCTTT
611	ACTTGCATCGCTGGGTAGATCCGG	CCGGATCTACCCAGCGATGCAAGT
612	TGCTTACGCAGTGGATTGGTCAGA	TCTGACCAATCCACTGCGTAAGCA
613	ATGCAGATGAACAAATCGCCGAAT	ATTCGGCGATTTGTTCATCTGCAT
614	GCAATTCTGGGCCATGTATTCGTC	GACGAATACATGGCCCAGAATTGC
615	AGGGTTCCTTACGCGTCGACATGG	CCATGTCGACGCGTAAGGAACCCT
616	GTGGAGCTAATCGCGAGCCTCAGA	TCTGAGGCTCGCGATTAGCTCCAC
617	TCGTAGTCTCACCGGCAATGATCC	GGATCATTGCCGGTGAGACTACGA
618	TTATAGCAGTGCGCCAATGCTTCG	CGAAGCATTGGCGCACTGCTATAA
619	CGAACAGTGCTGTCCGTCGCTCAA	TTGAGCGACGGACAGCACTGTTCG
620	TCCGCGTGGACTGTTAGACGCTAT	ATAGCGTCTAACAGTCCACGCGGA
621	CATTAGCCCGCTGTCGGTAACTGT	ACAGTTACCGACAGCGGGCTAATG
622	GGAAAGAAACTCAGACGCGCAATG	CATTGCGCGTCTGAGTTTCTTTCC
623	CGACTCGCTGGACAGGAGAATCGT	ACGATTCTCCTGTCCAGCGAGTCG
624	CATGATCCTCTGTTTCACCCGCGG	CCGCGGGTGAAACAGAGGATCATG
625	GGCGTAGCGCTCTAAAAGCTTCGG	CCGAAGCTTTTAGAGCGCTACGCC
626	AGTGATGCCATCAGGCCCGTATAC	GTATACGGGCCTGATGGCATCACT
627	TATGGAAAGGGCAACAGCGCTATC	GATAGCGCTGTTGCCCTTTCCATA
628	CTGTGGTTGATGGAGGATCCACAC	GTGTGGATCCTCCATCAACCACAG
629	ACTCGCTGGAATTTGCGCTGACAC	GTGTCAGCGCAAATTCCAGCGAGT
630	CAGGCCCGAACCACGCGGTTACAG	CTGTAACCGCGTGGTTCGGGCCTG
631	GGCGCAATGGGCGCATAAATACTA	TAGTATTTATGCGCCCATTGCGCC
632	GGTCAATTCGCGCTACATGCCCTA	TAGGGCATGTAGCGCGAATTGACC
633	GATGGTGGACTGGAGCCCTTCCGC	GCGGAAGGGCTCCAGTCCACCATC
634	CCGCGCATAGCGCAATAGGGGAGA	TCTCCCCTATTGCGCTATGCGCGG
635	TCTTCTGGCTGTCCGGCACCCGAA	TTCGGGTGCCGGACAGCCAGAAGA
636	GCGTTCGCAATTCACGGGCCCTTA	TAAGGGCCCGTGAATTGCGAACGC

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
637	TCGTTTCGGCCTTGGAGAGTATCG	CGATACTCTCCAAGGCCGAAACGA
638	AGGTGCAAGTGCAAGGCGAGAGGC	GCCTCTCGCCTTGCACTTGCACCT
639	CGCCAGTTTCGATGGCTGACGTTT	AAACGTCAGCCATCGAAACTGGCG
640	GCTTTACCGCCGATCCCAGATATC	GATATCTGGGATCGGCGGTAAAGC
641	GTGCTTGACGAAGAGGCGAAATGT	ACATTTCGCCTCTTCGTCAAGCAC
642	CAGTCCGTGCGCTTCATGTCCTCA	TGAGGACATGAAGCGCACGGACTG
643	TACGCGTAAGAGCCTACCCTCGCG	CGCGAGGGTAGGCTCTTACGCGTA
644	GGCGAGTCTTGTGGGGACATGTGT	ACACATGTCCCCACAAGACTCGCC
645	CCAAAGCGAAGCGAGCGTGTCTAT	ATAGACACGCTCGCTTCGCTTTGG
646	GCCGTAGGTTGCTCTTCACCGAAC	GTTCGGTGAAGAGCAACCTACGGC
647	AAATCCGCGATGTGCCGTGAGGCT	AGCCTCACGGCACATCGCGGATTT
648	GGCTTCGCACCCGTACCAATTTAG	CTAAATTGGTACGGGTGCGAAGCC
649	TGTAGAGTCCCACGTAGCCGGCAT	ATGCCGGCTACGTGGGACTCTACA
650	CACTAGTCTGGGGCAAGGTGCATT	AATGCACCTTGCCCCAGACTAGTG
651	TGTACTCGGCAGGCGCAATAGATT	AATCTATTGCGCCTGCCGAGTACA
652	AACGGGTATCGGAAGCGTAAAAGC	GCTTTTACGCTTCCGATACCCGTT
653	CGGACTGCCCGTTTGCAAGTTGAG	CTCAACTTGCAAACGGGCAGTCCG
654	ATCGTTCAGCACTGGAGCCCGTAA	TTACGGGCTCCAGTGCTGAACGAT
655	ATGCATCGAACTAGTCGTGACGGC	GCCGTCACGACTAGTTCGATGCAT
656	TTCCAGGCATTAAGGAGAGGGAGC	GCTCCCTCTCCTTAATGCCTGGAA
657	GTGCGACATCTACTCCACGATCCC	GGGATCGTGGAGTAGATGTCGCAC
658	CTCATCGTCCTAACACGAGAGCCC	GGGCTCTCGTGTTAGGACGATGAG
659	AATGGCACTTCGGCGGTGATGCAA	TTGCATCACCGCCGAAGTGCCATT
660	CCGTGGGAGGGAATCCAACCGAGG	CCTCGGTTGGATTCCCTCCCACGG
661	AAATTCTCGTTGGTGACGGCTCAT	ATGAGCCGTCACCAACGAGAATTT
662	TTGCTCTTATCCTTGTCCTGGGCG	CGCCCAGGACAAGGATAAGAGCAA
663	TTAAGGATCAGGCGGAGCTTGCAG	CTGCAAGCTCCGCCTGATCCTTAA
664	CGCGACTAAGGTGCTGCAACTCGA	TCGAGTTGCAGCACCTTAGTCGCG
665	GCTCGATTTCACGGCCCGTTGTTC	GAACAACGGGCCGTGAAATCGAGC
666	AGCAGAGTGCGTTGCAGAGGCTAA	TTAGCCTCTGCAACGCACTCTGCT
667	TGGAGGTGAGGACGACGTGCACTA	TAGTGCACGTCGTCCTCACCTCCA
668	AACCGTTTAGGGTACATTCGCGGT	ACCGCGAATGTACCCTAAACGGTT
669	TATGATCGCTCGGCTCACAGTTTG	CAAACTGTGAGCCGAGCGATCATA
670	GACTTTTTGCGGAAACGTCATGGT	ACCATGACGTTTCCGCAAAAAGTC
671	TGTCGGTTATTCCACCTGCAAGGA	TCCTTGCAGGTGGAATAACCGACA
672	CTATGGTTTGCACTGCGCCGTCGA	TCGACGGCGCAGTGCAAACCATAG
673	AGCAGGGAAATTCAATCGTTCGCA	TGCGAACGATTGAATTTCCCTGCT

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
674	CCTAACCGAGCGCTTAGCATTTCC	GGAAATGCTAAGCGCTCGGTTAGG
675	CCCGACCCTAACTCGCATTGAATA	TATTCAATGCGAGTTAGGGTCGGG
676	TTGCTTAATGGTGACGCCACGGAT	ATCCGTGGCGTCACCATTAAGCAA
677	GATGCTCGCCGTGTTTAGTTCACG	CGTGAACTAAACACGGCGAGCATC
678	TCGGATGACGAGTTTCCATGACGG	CCGTCATGGAAACTCGTCATCCGA
679	ATGCGGTCTACTTTCTCGATCGGG	CCCGATCGAGAAAGTAGACCGCAT
680	TTGCGAGGCTAAGCACACGGTAAA	TTTACCGTGTGCTTAGCCTCGCAA
681	AACTTAATTACCGCCTCTGGCGCC	GGCGCCAGAGGCGGTAATTAAGTT
682	GTGACCGCGAACTTGTTCCGACAG	CTGTCGGAACAAGTTCGCGGTCAC
683	TGCGGATTACCGATTCGCTCTTAA	TTAAGAGCGAATCGGTAATCCGCA
684	TGATAGGGGGCCACGTTGATCAGA	TCTGATCAACGTGGCCCCCTATCA
685	TCGCTCCGTAGCGATTCATCGTAG	CTACGATGAATCGCTACGGAGCGA
686	TGTCAGCTGGTAGCCTCCGTTTGA	TCAAACGGAGGCTACCAGCTGACA
687	AGCGTCGCATGACGCTTACGGCAC	GTGCCGTAAGCGTCATGCGACGCT
14	AGACGCACCGCAACAGGCTGTCAA	TTGACAGCCTGTTGCGGTGCGTCT
15	CGTGTAGGGGTCCCGTGCTGTCAA	TTGACAGCACGGGACCCCTACACG
690	GTCGCATTCTGCACTGGCTTCGCC	GGCGAAGCCAGTGCAGAATGCGAC
691	TGATTAGGTGCGGTCCCGTAGTCC	GGACTACGGGACCGCACCTAATCA
692	AAGGGACCTTGGGTGACGGCGAGA	TCTCGCCGTCACCCAAGGTCCCTT
693	TCAAATGGCCACCGCGTGTCATTC	GAATGACACGCGGTGGCCATTTGA
694	CTCCGACGACCAATAAATAGCCGC	GCGGCTATTTATTGGTCGTCGGAG
695	GGCTATTCCCGTAGAGAGCGTCCA	TGGACGCTCTCTACGGGAATAGCC
696	TGGATAACCTCTCGGTCCATCCAC	GTGGATGGACCGAGAGGTTATCCA
697	GACCGCTGTACGGGAGTGTGCCTT	AAGGCACACTCCCGTACAGCGGTC
698	GCCACAGAGTTTTAGCAGGGACCC	GGGTCCCTGCTAAAACTCTGTGGC
699	CCCACGCTTTCCGACCACTGACCT	AGGTCAGTGGTCGGAAAGCGTGGG
700	CATTGACACAATGCGGGGACTGAT	ATCAGTCCCCGCATTGTGTCAATG
701	AGCCACTCGACAGGGTTCCAAAGC	GCTTTGGAACCCTGTCGAGTGGCT
702	CAGGATGAGCAAAGCGACTCTCCA	TGGAGAGTCGCTTTGCTCATCCTG
703	CAAGGTATGGTCTGGGGCCTAAGC	GCTTAGGCCCCAGACCATACCTTG
704	GGTGTTCGGCCTAAACTCTTTCGG	CCGAAAGAGTTTAGGCCGAACACC
705	TTTAGTCGGACCCTGTGGCAATTC	GAATTGCCACAGGGTCCGACTAAA
706	CACACGTTTCCGACCAGCCTGAAC	GTTCAGGCTGGTCGGAAACGTGTG
707	CTGGACGAACTGGCTTCCTCGTAC	GTACGAGGAAGCCAGTTCGTCCAG
708	TTCACAATCCGCCGAAAACTGACC	GGTCAGTTTTCGGCGGATTGTGAA
709	AACAGGATATCCGCGATCACGACA	TGTCGTGATCGCGGATATCCTGTT
710	TACGTCGGATCCATTGCGCCGAGT	ACTCGGCGCAATGGATCCGACGTA

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
711	CATGGATCTCTCGGTTTGATCGCC	GGCGATCAAACCGAGAGATCCATG
712	AGCCAGGCGCGTATATACGCTCGG	CCGAGCGTATATACGCGCCTGGCT
713	ATTTGGCACGTGTCGTGCCATGTT	AACATGGCACGACACGTGCCAAAT
714	CCGCGTTGCACCACTTTGAGGTGC	GCACCTCAAAGTGGTGCAACGCGG
715	TTGGACGTGACAAGCATGGCGCTC	GAGCGCCATGCTTGTCACGTCCAA
716	CTGAATCGCGCAAGTAAATGGGGG	CCCCCATTTACTTGCGCGATTCAG
717	GATAAGGTCCACCAGATTGCGCGC	GCGCGCAATCTGGTGGACCTTATC
718	CTAACAATTGCCAACCGGGACGGC	GCCGTCCCGGTTGGCAATTGTTAG
719	GGTAACCTGGGTGCTTGCAGGTTA	TAACCTGCAAGCACCCAGGTTACC
720	ATCGGAGCCACCATTCGCATTGGG	CCCAATGCGAATGGTGGCTCCGAT
721	GTGAACTGGCTTGCCCCAGGATTA	TAATCCTGGGGCAAGCCAGTTCAC
722	AGGCGATAGCATGGTCCCATATGA	TCATATGGGACCATGCTATCGCCT
723	AACGGTATCGTGGCTAATGCACGA	TCGTGCATTAGCCACGATACCGTT
724	AGTAGTGGTCCTCCAGATCGGCAA	TTGCCGATCTGGAGGACCACTACT
725	CCGTTGAATTGGACGGGAGGTTAG	CTAACCTCCCGTCCAATTCAACGG
726	GCATAAGTGCGGCATCGCGAAGGG	CCCTTCGCGATGCCGCACTTATGC
727	CGACAAGATGCAGCTGCTACATGC	GCATGTAGCAGCTGCATCTTGTCG
728	TCGCAGTGATTCCCGACCGATAAG	CTTATCGGTCGGGAATCACTGCGA
729	CAAGGCGAGTCCACTCGAGGGGAC	GTCCCCTCGAGTGGACTCGCCTTG
730	GCAACTTGCACGGCATAAGTGGCC	GGCCACTTATGCCGTGCAAGTTGC
731	TCCGAGCTTGACGTTCGCGACGTC	GACGTCGCGAACGTCAAGCTCGGA
732	AGCGCTGGGCTGTGCTGCCATCTC	GAGATGGCAGCACAGCCCAGCGCT
733	TTCATGTCGCTGAGTAACCCTCGC	GCGAGGGTTACTCAGCGACATGAA
734	CGAACCGCTAATGCCCATTGTCAG	CTGACAATGGGCATTAGCGGTTCG
735	CACGGAAGGTGGGACAAATCGCCG	CGGCGATTTGTCCCACCTTCCGTG
736	CACAGATGGAGACAAACGCGCCTT	AAGGCGCGTTTGTCTCCATCTGTG
737	TTTTCGCAACTCGCTCCATAACCC	GGGTTATGGAGCGAGTTGCGAAAA
738	ACGTTACGTTTCCGGCGCCTCTAA	TTAGAGGCGCCGGAAACGTAACGT
739	TATCGGATTGCGTGGGTTTCAATC	GATTGAAACCCACGCAATCCGATA
740	CTTCCACAATTGTCTGCGACGCAC	GTGCGTCGCAGACAATTGTGGAAG
741	TGCACAAAGGTATGGCTGTCCGGC	GCCGGACAGCCATACCTTTGTGCA
742	TCCGATGCCAGTCCCATCTTAAGA	TCTTAAGATGGGACTGGCATCGGA
743	CTGAAACCGTGCGAATCGAGGTGA	TCACCTCGATTCGCACGGTTTCAG
744	CGGTGTTCCGCGTGTCGAAAAAAT	ATTTTTTCGACACGCGGAACACCG
745	TCTAGCAGGCCTTTTGAATCGCCA	TGGCGATTCAAAAGGCCTGCTAGA
746	GAGTCACCTCTGAGACGGACGCCA	TGGCGTCCGTCTCAGAGGTGACTC
747	TCTTCTGTCATCCTGCAGCAGCAT	ATGCTGCTGCAGGATGACAGAAGA

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
748	GCGGATGAAACCTGAAAGGGGCCT	AGGCCCCTTTCAGGTTTCATCCGC
749	GGGGCCCCAAACTGGTATCAAGCC	GGCTTGATACCAGTTTGGGGCCCC
750	GCATTGGCTTCGGATTCTCCTACA	TGTAGGAGAATCCGAAGCCAATGC
751	AGGCGGCCCAACTGTGAGGTCTTG	CAAGACCTCACAGTTGGGCCGCCT
752	ACACCATGTGCTCCGCGCTGCAGT	ACTGCAGCGCGGAGCACATGGTGT
753	ACGATGAACATGAATCGGGAGTCG	CGACTCCCGATTCATGTTCATCGT
754	CTGCATCCCTGTAGCAGCGCTCCG	CGGAGCGCTGCTACAGGGATGCAG
755	GTGCCGTATTTCGACCTGTGCGTT	AACGCACAGGTCGAAATACGGCAC
756	GCAGTGCGCACTTCAGTTCAAAAG	CTTTTGAACTGAAGTGCGCACTGC
757	GCGATTTTAAGCGATGCCTTGACG	CGTCAAGGCATCGCTTAAAATCGC
758	TAGGTGACCTAGGCTTGCTTGCGG	CCGCAAGCAAGCCTAGGTCACCTA
759	CTGGATACCTTGCCTGTGCGGCGC	GCGCCGCACAGGCAAGGTATCCAG
760	CCCCTTACGGCTCGTCGTCTATGC	GCATAGACGACGAGCCGTAAGGGG
761	GCGCTTGCCCGATGCGATGCATTA	TAATGCATCGCATCGGGCAAGCGC
762	TTTCTGTAAGCGGCCTGGGGTTCA	TGAACCCCAGGCCGCTTACAGAAA
763	GGCTGAGGTGAGCGGTAAGGATGA	TCATCCTTACCGCTCACCTCAGCC
764	TCTTGGCCTCCCCGATCTAATTTG	CAAATTAGATCGGGGAGGCCAAGA
765	GGAGGTAACGCCGTGTACGTAGGA	TCCTACGTACACGGCGTTACCTCC
766	GTAATCCATTTGTGGCTGCGTCAA	TTGACGCAGCCACAAATGGATTAC
767	CAAACCCATTCCAGCAGACGCCTG	CAGGCGTCTGCTGGAATGGGTTTG
768	TAGGAGGAATTTGGCATGCGGGCG	CGCCCGCATGCCAAATTCCTCCTA
769	ATAGGTAGGATGTGCCCGGCGTTG	CAACGCCGGGCACATCCTACCTAT
770	GCAAGTGCTTAGCTCGTCAGCCTC	GAGGCTGACGAGCTAAGCACTTGC
771	CTGGCTGTGTCGCATCTCGTTAAC	GTTAACGAGATGCGACACAGCCAG
772	CTAACGTCGTCTCGCGCAATCACT	AGTGATTGCGCGAGACGACGTTAG
773	TTTTCATAAACGTTGTCCCCGAGC	GCTCGGGGACAACGTTTATGAAAA
774	AGCAGGAGGACGAACCTCCGCTCC	GGAGCGGAGGTTCGTCCTCCTGCT
775	TTCAAGCACCATCGTGCAATCCAA	TTGGATTGCACGATGGTGCTTGAA
776	AGCGTCGCCAGTGATCGCTAGTGG	CCACTAGCGATCACTGGCGACGCT
777	TACATTCCCTGCCTCCGTGGGCTT	AAGCCCACGGAGGCAGGGAATGTA
778	CGCTTCGCGTATTCAGTAGCGGTT	AACCGCTACTGAATACGCGAAGCG
779	TCGGACGCGTCGACACTCATTATA	TATAATGAGTGTCGACGCGTCCGA
780	TCTGAGCAGGCCAGCGCTCCAGCT	AGCTGGAGCGCTGGCCTGCTCAGA
781	TTGAATTGCCAAGCCCTGAAAGCC	GGCTTTCAGGGCTTGGCAATTCAA
782	AGTTTTCGCCTTGATGCGTCGGTG	CACCGACGCATCAAGGCGAAAACT

TABLE 3-continued

Seq. ID No.	Decoder Sequence (5'-3')	Probe Sequence (5'-3')
783	GTTTCATAGGCCACGCGTGCTAAA	TTTAGCACGCGTGGCCTATGAAAC
16	CATCGCTGCAAGTACCGCACTCAA	TTGAGTGCGGTACTTGCAGCGATG

[0209]

TABLE 4

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
17	TTTCGCCGTCGTGTAGGCTTTTCAA	TTTGAAAAGCCTACACGACGGCGAA
18	TGTTCCCAGTGAAGCTGCGATCTGG	TCCAGATCGCAGCTTCACTGGGAAC
19	TTACTTGGCATGGAATCCCTTACGC	TGCGTAAGGGATTCCATGCCAAGTA
20	TACTAGCATATTTCAGGGCACCGGC	TGCCGGTGCCCTGAAATATGCTAGT
21	TGAACGGTCAATGAACCCGCTGTGA	TTCACAGCGGGTTCATTGACCGTTC
22	TGCGGCCTTGGTTCAATATGAATCG	TCGATTCATATTGAACCAAGGCCGC
23	TGATCGTTAGAGGGACCTTGCCCGA	TTCGGGCAAGGTCCCTCTAACGATC
24	TTGGACCTAGTCCGGCAGTGACGAA	TTTCGTCACTGCCGGACTAGGTCCA
25	TATAAACTACCCAGGACGGGCGGAA	TTTCCGCCCGTCCTGGGTAGTTTAT
26	TCATCGGTTCGCGCCAATCCAGATA	TTATCTGGATTGGCGCGAACCGATG
27	TGTCGGGCATAGAGCCGACCACCCT	TAGGGTGGTCGGCTCTATGCCCGAC
28	TCTTGGGTCATGATTCACCGTGCTA	TTAGCACGGTGAATCATGACCCAAG
29	TTGCCTAACGTGCTAATCAGCAGCG	TCGCTGCTGATTAGCACGTTAGGCA
30	TCGCATGTTGGAGCATATGCCCTGA	TTCAGGGCATATGCTCCAACATGCG
31	TAGCCACTGCATCAGTGCTGTTCAA	TTTGAACAGCACTGATGCAGTGGCT
32	TGGTTGTTTTGAGGCGTCCCACACT	TAGTGTGGGACGCCTCAAAACAACC
33	TTCGACCAAGAGCAAGGGCGGACCA	TTGGTCCGCCCTTGCTCTTGGTCGA
34	TGACATCGCTATTGCGCATGGATCA	TTGATCCATGCGCAATAGCGATGTC
35	TGAAATACGAAGTCTGCGGGAGTCG	TCGACTCCCGCAGACTTCGTATTTC
36	TTGTCATGAATGATTGATCGCGCGA	TTCGCGCGATCAATCATTCATGACA
37	TATATCGGGATTCGTTCCCGGTGAA	TTTCACCGGGAACGAATCCCGATAT
38	TGCGAGCGTACCGAAGGGCCTAGAA	TTTCTAGGCCCTTCGGTACGCTCGC
39	TTTACCGGCAGCGGACTTCCGAATT	TAATTCGGAAGTCCGCTGCCGGTAA
40	TGTAATCGAGAGCTGCGCGCCGTCT	TAGACGGCGCGCAGCTCTCGATTAC
41	TCCTGTTAGCGTAGGCGAGTCGATC	TGATCGACTCGCCTACGCTAACAGG
42	TTAGCGGACCGGCAGAATGAGTTCC	TGGAACTCATTCTGCCGGTCCGCTA
43	TGGTACATGCACTACGCGCACTCGG	TCCGAGTGCGCGTAGTGCATGTACC
44	TAATTCATCTCGGACTCCCGCGGTA	TTACCGCGGGAGTCCGAGATGAATT
45	TGCCAAATCTGGATTGGCAGGAATG	TCATTCCTGCCAATCCAGATTTGGC
46	TTGCATTTTCGGTTGAGGCACATCC	TGGATGTGCCTCAACCGAAAATGCA

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
47	TCCGCTCAATTCACCATGCTTCGCT	TAGCGAAGCATGGTGAATTGAGCGG
48	TCTCGGAAAGGTGCAACTTTGGTGT	TACACCAAAGTTGCACCTTTCCGAG
49	TAATTCGACCAGCAGAACGTCGCAT	TATGGGACGTTCTGCTGGTCGAATT
50	TGCCAGAGTCTCAACCTCACGGGAT	TATCCCGTGAGGTTGAGACTCTGGC
51	TCCAACAACTGGAACGGGAACCCGC	TGCGGGTTCCCGTTCCAGTTGTTGG
52	TGAGAACTGATCGCTGAGGGGCATG	TCATGCCCCTCAGCGATCAGTTCTC
53	TGGCACACTAGACTTGTGGCACCGA	TTCGGTGCCACAAGTCTAGTGTGCC
54	TTCACATCCAAATATGGTCCGCGAA	TTTCGCGGACCATATTTGGATGTGA
55	TGTCTGCCGGTGTGACCGCTTCATT	TAATGAAGCGGTCACACCGGCAGAC
56	TCATCGCAGAGCATAAACACCCTCA	TTGAGGGTGTTTATGCTCTGCGATG
57	TGTTGGTATCTATGGCAGAGGCGGA	TTCCGCCTCTGCCATAGATACCAAC
58	TACGAGGTGCCGCTGAGGTTCCATT	TAATGGAACCTCAGCGGCACCTCGT
59	TGGAATGAGTGGACCCAGGCACATT	TAATGTGCCTGGGTCCACTCATTCC
60	TTGTCAATATGCGTCCGTGTCGTCT	TAGACGACACGGACGCATATTGACA
61	TTGATGAGCCTCAGGGTACGAGGCA	TTGCCTCGTACCCTGAGGCTCATCA
62	TCACCGCGGTGTTCCTACAGAATGA	TTCATTCTGTAGGAACACCGCGGTG
63	TTTGTTGCCAATGGTGTCCGCTCGG	TCCGAGCGGACACCATTGGCAACAA
64	TTTAACCTGCGTCTGCCCCTTTCCT	TAGGAAAGGGGCAGACGCAGGTTAA
65	TAGGCGCGTTCCTGCCTTAGTGACG	TCGTCACTAAGGCAGGAACGCGCCT
66	TTAGGGCGATGGCACGAAGCTTCAA	TTTGAAGCTTCGTGCCATCGCCCTA
67	TTGCATAGAGCCAAAGTCGGCGATG	TCATCGCCGACTTTGGCTCTATGCA
68	TTTGAGAGGCAGGTGGCCACACGGA	TTCCGTGTGGCCACCTGCCTCTCAA
69	TTCCGCATTGTGAGAAAAAAACGAGC	TGCTCGTTTTTTCTCACAATGCGGA
70	TGGCGGTTTCCGTAGCTATAGGTGC	TGCACCTATAGCTACGGAAACCGCC
71	TGGTGAAAATTTCGTAGCCACGGGC	TGCCCGTGGCTACGAAATTTTCACC
72	TCCGACGGAGGATGAAGACAATCAC	TGTGATTGTCTTCATCCTCCGTCGG
73	TCCAGTTTGGCCCAATTCGCCAAAA	TTTTTGGCGAATTGGGCCAAACTGG
74	TGGATCTATTAGGCCGTGCGCACAG	TCTGTGCGCACGGCCTAATAGATCC
75	TCGGATGTCACCGTTTGGACTTTCA	TTGAAAGTCCAAACGGTGACATCCG
76	TATCGCAAATCCTGCTCGTCCCTAA	TTTAGGGACGAGCAGGATTTGCGAT
77	TCAGGGCATGCAATAATCGAGGTTC	TGAACCTCGATTATTGCATGCCCTG
78	TCATGCGTTGATATATGGGCCCAAG	TCTTGGGCCCATATATCAACGCATG
79	TCAGCTGCAGCTTGTGACCAACCAC	TGTGGTTGGTCACAAGCTGCAGCTG
80	TTTGTATGTCTGCCGACCGGCGACC	TGGTCGCCGGTCGGCAGACATACAA
81	TGATGGCGCCCGTTGATAGGTATGG	TCCATACCTATCAACGGGCGCCATC
82	TATGAGAATCGCCGGCAATCTGCTA	TTAGCAGATTGCCGGCGATTCTCAT
83	TATTTGCACTGACCGCAGGCTCGTG	TCACGAGCCTGCGGTCAGTGCAAAT

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
84	TCAGGGAGAACGGTTAAGTTCCCGT	TACGGGAACTTAACCGTTCTCCCTG
85	TAGGCCGGCGATCGAGGAGTTTGGT	TACCAAACTCCTCGATCGCCGGCCT
86	TACACGGTGGTCTCTGATAGCGACC	TGGTCGCTATCAGAGACCACCGTGT
87	TGTGCAACGCCGAGGACTTCCATCA	TTGATGGAAGTCCTCGGCGTTGCAC
88	TTCGGTGCCTGATAGCCATTCCGAT	TATCGGAATGGCTATCAGGCACCGA
89	TTGAAATACCACACAGCCAATTGGC	TGCCAATTGGCTGTGTGGTATTTCA
90	TGCATCGTGTACATGACTGCCGCGA	TTCGCGGCAGTCATGTACACGATGC
91	TCAGTGTTCTAACGGCGCGCGTGAA	TTTCACGCGCGCCGTTAGAACACTG
92	TCGCTTGCAACGTTGCACCTACTCT	TAGAGTAGGTGCAACGTTGCAAGCG
93	TCGAAAAACTAGTGGGCTCGCCGCG	TCGCGGCGAGCCCACTAGTTTTTCG
94	TCTTTCAGGGGAACTGCCGGAGTCG	TCGACTCCGGCAGTTCCCCTGAAAG
95	TTTGTGGCCTTCTTGTAAAGGCACG	TCGTGCCTTTACAAGAAGGCCACAA
96	TTCCACGAACGGCGACCCGTTGTCT	TAGACAACGGGTCGCCGTTCGTGGA
97	TCGACCTTGCACGAAACCTAACGAG	TCTCGTTAGGTTTCGTGCAAGGTCG
98	TGTGCAGCTTCACGAGCCAGCCTGA	TTCAGGCTGGCTCGTGAAGCTGCAC
99	TCGCTTTCGTGCGAATAGACGATGA	TTCATCGTCTATTCGCACGAAAGCG
100	TTGCGCTTACAGGCTCCTAGTGGTC	TGACCACTAGGAGCCTGTAAGCGCA
101	TCACGCGCTTAGTCGCGATCGCATA	TTATGCGATCGCGACTAAGCGCGTG
102	TCGGAGGGAGGGAGCTAGCCTTCGA	TTCGAAGGCTAGCTCCCTCCCTCCG
103	TGCATCCGGCCTGTTGATGACGCCT	TAGGCGTCATCAACAGGCCGGATGC
104	TAGGCCAATCGATCTTATTGCCGAG	TCTCGGCAATAAGATCGATTGGCCT
105	TCCTTCCAATGATTGCATACGCCCA	TTGGGCGTATGCAATCATTGGAAGG
106	TAACACTTGATCAGGCGGGTCGTCT	TAGACGACCCGCCTGATCAAGTGTT
107	TTGGAATCAAGGCCGTAAAGGACAG	TCTGTCCTTTACGGCCTTGATTCCA
108	TGCTCCCGTAACCTGTCCACCAGTG	TCACTGGTGGACAGGTTACGGGAGC
109	TAGTGGTGAATGGCCGCTACCCTGA	TTCAGGGTAGCGGCCATTCACCACT
110	TTGTTGAAGCGAGCTAAAACGGCCA	TTGGCCGTTTTAGCTCGCTTCAACA
111	TCAGCGCTCCAGAATTGACAGCAAT	TATTGCTGTCAATTCTGGAGCGCTG
2	TTTCGAAGCGCACGTCCCTTTTCAA	TTTGAAAAGGGACGTGCGCTTCGAA
3	TAACGCGTGGGGAATGGGACATCAA	TTTGATGTCCCATTCCCCACGCGTT
114	TCACGAGATACCGGCGTAAGGGTGG	TCCACCCTTACGCCGGTATCTCGTG
115	TCTACGGCAAACGTGTGGAATGGGT	TACCCATTCCACACGTTTGCCGTAG
116	TGTAGGGCGATGACGGGCGAACTAC	TGTAGTTCGCCCGTCATCGCCCTAC
117	TAATCGACCTCCGCACACATTCGCA	TTGCGAATGTGTGCGGAGGTCGATT
118	TGAGTCAGCATGGCGGCGGAGATTC	TGAATCTCCGCCGCCATGCTGACTC
119	TAGATAAAGACGCTGGCAACACGGG	TCCCGTGTTGCCAGCGTCTTTATCT
120	TGGTACCTCAACGCGAACCACTTGT	TACAAGTGGTTCGCGTTGAGGTACC

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
121	TAAGCGATGGCTACCCAAGAGCGAT	TATCGCTCTTGGGTAGCCATCGCTT
122	TAGAGCTTATGCAGAACCAGGCGCC	TGGCGCCTGGTTCTGCATAAGCTCT
123	TATCGGTCTCACGCAGGGTTGGATA	TTATCCAACCCTGCGTGAGACCGAT
124	TTAGGTTGCCCGCCAGAAGAAACAT	TATGTTTCTTCTGGCGGGCAACCTA
125	TCGGTGCTGTTGCAAAAGCCTGTAG	TCTACAGGCTTTTGCAACAGCACCG
126	TTGATGAAAGTTTGCGGCAGGACAC	TGTGTCCTGCCGCAAACTTTCATCA
127	TGTTGAGTGCAGGATGCAGCGATAG	TCTATCGCTGCATCCTGCACTCAAG
128	TAACATTGCGCGGTCCACCAGGGTT	TAACCCTGGTGGACCGCGCAATGTT
129	TGGGCAGTTAGAGAGGGCCAGAAGT	TACTTCTGGCCCTCTCTAACTGCCC
130	TTCGAGCTGGTCCCCGTGAACGTGT	TACACGTTCACGGGGACCAGCTCGA
131	TGTCTTGGGGGCCGCTTAGTGAAAA	TTTTTCACTAAGCGGCCCCCAAGAC
132	TACTGTTGGCTTGCTCTCATGTCCA	TTGGACATGAGAGCAAGCCAACAGT
133	TAGGACCATTCGGAAGGCGAAGATA	TTATCTTCGCCTTCCGAATGGTCCT
134	TCTTGGGAGGCATCCGCTATAAGGA	TTCCTTATAGCGGATGCCTCCCAAG
135	TAATAAACGGAACGCACCGCTACAG	TCTGTAGCGGTGCGTTCCGTTTATT
136	TTTGTACGTGCGGTCCCCATAAGCA	TTGCTTATGGGGACCGCACGTACAA
137	TCGCACCAAACTGAGTTTCCCAGAC	TGTCTGGGAAACTCAGTTTGGTGCG
138	TACCTGATCGTTCCCCTATTGGGAA	TTTCCCAATAGGGGAACGATCAGGT
139	TGGAACAGAGGCGAGGGGACTGAGC	TGCTCAGTCCCCTCGCCTCTGTTCC
140	TCCCTGCCTTGGCGTGTCGGCTTAT	TATAAGCCGACACGCCAAGGCAGGG
141	TACTCTGACACGCCAACTCCGGAAG	TCTTCCGGAGTTGGCGTGTCAGAGT
142	TCTGACGGTTTTCATTCGGCGTGCC	TGGCACGCCGAATGAAAACCGTCAG
143	TTGCGGTGGTTCATTGGAGCTGGCC	TGGCCAGCTCCAATGAACCACCGCA
144	TGCATGGCCAACTAGTGACTCGCAA	TTTGCGAGTCACTAGTTGGCCATGC
145	TAGGCCGTAAAGCGAATCTCACCTG	TCAGGTGAGATTCGCTTTACGGCCT
146	TCGAATATTATGCCGAGAATCCGCG	TCGCGGATTCTCGGCATAATATTCG
147	TACAGACGAGCTCCCAACCACATGA	TTCATGTGGTTGGGAGCTCGTCTGT
148	TGGACGGTTTGTGCTGGATTGTCTG	TCAGACAATCCAGCACAAACCGTCC
149	TAAAGGCTATTGAGTTGGTTGGGCG	TCGCCCAACCAACTCAATAGCCTTT
150	TGATGGCCTATTCGGAGATCGGGCC	TGGCCCGATCTCCGAATAGGCCATC
151	TGATCCAGTAGGCAGCTTCATCCCA	TTGGGATGAAGCTGCCTACTGGATC
152	TAATAACTCGCGCGGGTATGCTTCT	TAGAAGCATACCCGCGCGAGTTATT
153	TGGAGGAGGTTTGTCTCGGAAAGCA	TTGCTTTCCGAGACAAACCTCCTCC
154	TCTTTGGTATGGCACATGCTGCCCG	TCGGGCAGCATGTGCCATACCAAAG
155	TAGAAAGGCTCGAGCAACGGGAACT	TAGTTCCCGTTGCTCGAGCCTTTCT
156	TAATCTACCGCACTGGTCCGCAAGT	TACTTGCGGACCAGTGCGGTAGATT
157	TCGTGGCGGCCACAGTTTTTGGAGG	TCCTCCAAAAACTGTGGCCGCCACG

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
158	TTTGCAGTTCAATCCATACGCACGT	TACGTGCGTATGGATTGAACTGCAA
159	TGGCCCAAAGCCCCAGACCATTTTA	TTAAAATGGTCTGGGGCTTTGGGCC
160	TCGCCTGTCTTTGTCTCCGGACAAT	TATTGTCCGGAGACAAAGACAGGCG
161	TTGAGGCAACAGGGGCCAAAAACTA	TTAGTTTTTGGCCCCTGTTGCCTCA
162	TAGCGGAAGTAGTCCTCGGCTCGTC	TGACGAGCCGAGGACTACTTCCGCT
163	TGGCCCCAAGGCTTAGAGATAGTGG	TCCACTATCTCTAAGCCTTGGGGCC
164	TGCACGTGAAGTTTAACCGCGATTC	TGAATCGCGGTTAAACTTCACGTGC
165	TAGCGGCAGAAACGTTCCTTGACGG	TCCGTCAAGGAACGTTTCTGCCGCT
166	TTCGTCGAGCAGACGAGATTGCACG	TCGTGCAATCTCGTCTGCTCGACGA
167	TTCTTTGCCGCGTAACTGACTGCTT	TAAGCAGTCAGTTACGCGGCAAAGA
168	TTTTATGTGCCAAGGGGTTAACCGA	TTCGGTTAACCCCTTGGCACATAAA
169	TTGTTACTGTGGTTCACGGCAGTCC	TGGACTGCCGTGAACCACAGTAACA
170	TCGCGCCTCGCTAGACCTTTTATTG	TCAATAAAAGGTCTAGCGAGGCGCG
171	TACAAATGCGTGAGAGCTCCCAACT	TAGTTGGGAGCTCTCACGCATTTGT
172	TCGCGCAGATTATAGACCCGAATGT	TACATTCGGGTCTATAATCTGCGCG
173	TCAAATAACGCCGCTGAATCGGCGT	TACGCCGATTCAGCGGCGTTATTTG
174	TCCTTCGTGCATCGGTGATGATGTT	TAACATCATCACCGATGCACGAAGG
175	TTGAACACGAGCAACACTCCAACGC	TGCGTTGGAGTGTTGCTCGTGTTCA
176	TCAGCAGATCCTTCGTAGCGGTCGT	TACGACCGCTACGAAGGATCTGCTG
177	TGGAACCTGGTGAGTTGTGCCTCAT	TATGAGGCACAACTCACCAGGTTCC
178	TTCATAAGCGACAATCGCGGGCTTA	TTAAGCCCGCGATTGTCGCTTATGA
179	TCCCAACGTCACTGAAGCTCACAGT	TACTGTGAGCTTCAGTGACGTTGGG
180	TTGTCAGAGCCCGCGACTCAGACGG	TCCGTCTGAGTCGCGGGCTCTGACA
181	TTACACGAAGCCTCTCCGTGGTCCA	TTGGACCACGGAGAGGCTTCGTGTA
182	TCTCAGAAGTCCTCGGCGAACTGGG	TCCCAGTTCGCCGAGGACTTCTGAG
183	TATCCTTTTATCTACTCCGCGGCGA	TTCGCCGCGGAGTAGATAAAAGGAT
184	TAGGCGTGCAGCAACAGGATAAACC	TGGTTTATCCTGTTGCTGCACGCCT
185	TACTCTCGAGGGAGTCTCTGGCACA	TTGTGCCAGAGACTCCCTCGAGAGT
186	TTTGCCAGGTCCATCGAGACCTGTT	TAACAGGTCTCGATGGACCTGGCAA
187	TTCCACTATAACTGCGGGTCCGTGT	TACACGGACCCGCAGTTATAGTGGA
188	TGCCCAGTCGGCTCTAACAAGTTCG	TCGAACTTGTTAGAGCCGACTGGGC
189	TCGGAACGGATAATCGGCGTCAGGT	TACCTGACGCCGATTATCCGTTCCG
190	TTAAAATAAGCGCCTGGCGGGAGGA	TTCCTCCCGCCAGGCGCTTATTTTA
191	TGCGCACTCGTGAAACCTTTCTCGC	TGCGAGAAAGGTTTCACGAGTGCGC
192	TAGTTTGCCAGGTACTGGCAAGTGC	TGCACTTGCCAGTACCTGGCAAACT
193	TACAACGAGGGATGTCCAGCGGCAT	TATGCCGCTGGACATCCCTCGTTGT
194	TTTCGCAGCACCCGCTAGGTACAGT	TACTGTACCTAGCGGGTGCTGCGAA

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
195	TTAACCCGATTTTTGCGACTCTGCC	TGGCAGAGTCGCAAAAATCGGGTTA
196	TCGTCGCATTGCAAGCGTAGGCTTG	TCAAGCCTACGCTTGCAATGCGACG
197	TGAGCTGACGTCACCATCAGAGGAA	TTTCCTCTGATGGTGACGTCAGCTC
198	TGGAGGCTGGGGGTCGCGCTTAAGT	TACTTAAGCGCGACCCCCAGCCTCC
199	TTTGTGGGAACCGCACTAGCTGGCT	TAGCCAGCTAGTGCGGTTCCCACAA
200	TCCCTCGCACTGTGTTCACGCTCTT	TAAGAGGGTGAACACAGTGCGAGGG
201	TTCATTGACTCGAATCCGCACAACG	TCGTTGTGCGGATTCGAGTCAATGA
202	TACAGGGGTTGGCCTTCGTACGTAC	TGTACGTACGAAGGCCAACCCCTGT
203	TAGGCCGTGCAACATCACACAGGAT	TATCCTGTGTGATGTTGCACGGCCT
204	TGGGCCGTGGTCACGTAATATTGGC	TGCCAATATTACGTGACCACGGCCC
205	TGCGCGGACATGAAACGACAAGGCC	TGGCCTTGTCGTTTCATGTCCGCGC
206	TCTTATTGGGTGCCGGTGTCGGATT	TAATCCGACACCGGCACCCAATAAG
207	TGGGGCGGTTACCAAAAAATCCGAT	TATCGGATTTTTTGGTAACCGCCCC
4	TCCGTCGCATACCGGCTACGATCAA	TTTGATCGTAGCCGGTATGCGACGG
5	TATGGCCGTGCTGGGGACAAGTCAA	TTTGACTTGTCCCCAGCACGGCCAT
210	TACGAAAAAAGTGTGCGGATCCCCT	TAGGGGATCCGCACACTTTTTTCGT
211	TCCAAGTACACCGCACGCATGTTTA	TTAAACATGCGTGCGGTGTACTTGG
212	TATCGTGCGTGGAGTGTCGCATCTA	TTAGATGCGACACTCCACGCACGAT
213	TTCCAGATACCGCCCCGAACTTTGA	TTCAAAGTTCGGGGCGGTATCTGGA
214	TTCTGCTGGCAGCACGTGAAGTGGC	TGCCACTTCACGTGCTGCCAGCAGA
215	TTTGAAATTGCTCTGCCGTCAGTCA	TTGACTGACGGCAGAGCAATTTCAA
216	TAGTCAGGCGAGATGTTCAGGCAGC	TGCTGCCTGAACATCTCGCCTGACT
217	TACAAGCCGACGTTAAGCCCGCCCA	TTGGGCGGGCTTAACGTCGGCTTGT
218	TCCCTAATGAGGCCAGTAACCTGCA	TTGCAGGTTACTGGCCTCATTAGGG
219	TGTGAGACACACATCCCCTCCAATG	TCATTGGAGGGGATGTGTGTCTCAC
220	TCGACGGATGCAGAGTTCAGTGGTC	TGACCACTGAACTCTGCATCCGTCG
221	TCCCGCATGCCTGGCGGTATTACAA	TTTGTAATACCGCCAGGCATGCGGG
222	TTTAGCAAAGCGGCGCCGTTAGCAA	TTTGCTAACGGCGCCGCTTTGCTAA
223	TCCCGACACGGGTCAGCGTAATAAT	TATTATTACGCTGACCCGTGTCGGG
224	TGCGACGGCCCTGAGGTATGTCGTC	TGACGACATACCTCAGGGCCGTCGC
225	TCAAAAGTGTGTTCCCTTGCGCTTG	TCAAGCGCAAGGGAACACACTTTTG
226	TTCTCGAAGCACAGCCCGGTTATTG	TCAATAACCGGGCTGTGCTTCGAGA
227	TATGCTAACCGTTGGCCATGGAACT	TAGTTCCATGGCCAACGGTTAGCAT
228	TCTTGCGGAGTGTTAGCCCAGCGGT	TACCGCTGGGCTAACACTCCGCAAG
229	TTGCTCCCTAGGCGCTCGGAGGAGT	TACTCCTCCGAGCGCCTAGGGAGCA
230	TCCAATGCCTTTGAGTAAGCGATGG	TCCATCGCTTACTCAAAGGCATTGG
231	TAGCAGATAACGTCCCAATGACGCC	TGGCGTCATTGGGACGTTATCTGCT

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
232	TTTGACCATTACGTGTTGCGCCCAT	TATGGGCGCAACACGTAATGGTCAA
233	TTCGCGTATTTGCGGAATTCGTCTG	TCAGACGAATTCCGCAAATACGCGA
234	TCTGCGTGTCAACAATGTCCCGCAG	TCTGCGGGACATTGTTGACACGCAG
235	TTCTGGTGCCACGCAAGGTCCACAG	TCTGTGGACCTTGCGTGGCACCAGA
236	TCTCCGGGAGGTCACTTAATTGCGG	TCCGCAATTAAGTGACCTCCCGGAG
237	TTTTTCGTGATTGCCCGGAGGAGGC	TGCCTCCTCCGGGCAATCACGAAAA
238	TTCGGGATGTAGCTGGGGCTACCGG	TCCGGTAGCCCCAGCTACATCCCGA
239	TCGAGCCAACGCAAACACGTCCTTG	TCAAGGACGTGTTTGCGTTGGCTCG
240	TGCAAAGCCTTTGTGGGGCGGTAGT	TACTACCGCCCCACAAAGGCTTTGC
241	TATTCGACCGGAAATGAGGTCTTCG	TCGAAGACCTCATTTCCGGTCGAAT
242	TTTCGCTTGCTGAGTTGCTCTGTTC	TGAACAGAGCAACTCAGCAAGCGAA
243	TCGCGTGAAGACCCCATTCCCGAGT	TACTCGGGAATGGGGTCTTCACGCG
244	TAACCGTATTCGCGGTCACTTGTGG	TCCACAAGTGACCGCGAATACGGTT
245	TGGGGCCAACCGTTTCGAGGCGTAT	TATACGCCTCGAAACGGTTGGCCCC
246	TTTCGGCTGGCAGTCCAAACGGCTT	TAAGCCGTTTGGACTGCCAGCCGAA
247	TGGGTGTGGTTAGAATGCACGGTTC	TGAACCGTGCATTCTAACCACACCC
248	TGCGAGGACCGAACTAGACAAACGG	TCCGTTTGTCTAGTTCGGTCCTCGC
249	TACGCACGCGTGACCGAAGTTGCTG	TCAGCAACTTCGGTCACGCGTGCGT
250	TTAAAAGGTCGCTTTGAAAGGGGGA	TTCCCCCTTTCAAAGCGACCTTTTA
251	TTGCGATCGCTAACTGCTGGGACAA	TTTGTCCCAGCAGTTAGCGATCGCA
252	TGGAGGTATAAGCGGAGCGGCCTCA	TTGAGGCCGCTCCGCTTATACCTCC
253	TATGCTGACATGTCGTGCACCTCGT	TACGAGGTGCACGACATGTCAGCAT
254	TTGTGGTTAAAGCGTCCGTTCAACG	TCGTTGAACGGACGCTTTAACCACA
255	TCGTTCACACCGGCGTAAGCTGCGT	TACGCAGCTTACGCCGGTGTGAACG
256	TCCTATCCCGGCGAGAACTTCTGTG	TCACAGAAGTTCTCGCCGGGATAGG
257	TGTCTGCACTCACGCAGCGGAGGGA	TTCCCTCCGCTGCGTGAGTGCAGAC
258	TGCACGAGTTGGTGCTCGGCAGATT	TAATCTGCCGAGCACCAACTCGTGC
259	TAACGTCGCACGACACACGTTCGTC	TGACGAACGTGTGTCGTGCGACGTT
260	TATGCGCGCTTATCCTAGCATGGTC	TGACCATGCTAGGATAAGCGCGCAT
261	TTCACGTTTTCGTCTCGACATGAGG	TCCTCATGTCGAGACGAAAACGTGA
262	TTGTGCCTCATCCTTAGGATACGGC	TGCCGTATCCTAAGGATGAGGCACA
263	TAGGTGGTGTGGGTCAACCGCTTTA	TTAAAGCGGTTGACCCACACCACCT
264	TCTGGATCGAAGGGACTGCAAGCTC	TGAGCTTGCAGTCCCTTCGATCCAG
265	TTAGATCAACTCGCGTACGCATGGA	TTCCATGCGTACGCGAGTTGATCTA
266	TGATCCTGCGGAGAAGAGAGTGCAG	TCTGCACTCTCTTCTCCGCAGGATC
267	TTACGTGTGGAGATGCCCCGAACCG	TCGGTTCGGGGCATCTCCACACGTA
268	TGCGCTATGTCAATCGTGGGCGTAG	TCTACGCCCACGATTGACATAGCGC

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
269	TAGCGAGGTTTCTAGCGTCGACACC	TGGTGTCGACGCTAGAAACCTCGCT
270	TACCCAGGTTTTGCCGTTGTGGAAT	TATTCCACAACGGCAAAACCTGGGT
271	TCCCTGTTAACGGCTGCGTAGTCTC	TGAGACTACGCAGCCGTTAACAGGG
272	TAGGCCGATTTCACCCGCCAATTGC	TGCAATTGGCGGGTGAAATCGGCCT
273	TGAGCCCTCACTCCTTGCCCTTTGA	TTCAAAGGGCAAGGAGTGAGGGCTC
274	TGGGTGGACATCCGCCTCGCAGTCA	TTGACTGCGAGGCGGATGTCCACCC
275	TGATGGCTGAGAACCGTGCTACGAT	TATCGTAGCACGGTTCTCAGCCATC
276	TTCGACGTTAGGAGTGCTGCCAGAA	TTTCTGGCAGCACTCCTAACGTCGA
277	TCGAATGGGTCTGGACCTTGCATAG	TCTATGCAAGGTCCAGACCCATTCG
278	TGTGCACCAGACATTCGAACTCGGA	TTCCGAGTTCGAATGTCTGGTGCAC
279	TAGAGGCCCCGTATATCCCATCCAT	TATGGATGGGATATACGGGGCCTCT
280	TAACGCCTGTTCAGAGCATCAGCGG	TCCGCTGATGCTCTGAACAGGCGTT
281	TAAGGCTCAACACGCCTATGTGCGC	TGCGCACATAGGCGTGTTGAGCCTT
282	TAGTCCGTGTTGCCAGATTGGCTCG	TCGAGCCAATCTGGCAACACGGACT
283	TATGTCCCATGTAAAGACGCGTGTG	TCACACGCGTCTTTACATGGGACAT
284	TATGGAGTCTGCTCACGCCCAAAGG	TCCTTTGGGCGTGAGCAGACTCCAT
285	TCGGCCTCCAACAAGGAGCACTAAC	TGTTAGTGCTCCTTGTTGGAGGCCG
286	TCAGAGCCGTGGCAACATTGCGAGC	TGCTCGCAATGTTGCCACGGCTCTG
287	TTCATTTGAATGAGGTGCGCACCGG	TCCGGTGCGCACCTCATTCAAATGA
288	TGACGTACCGGAAGCGCCGTATAAA	TTTTATACGGCGCTTCCGGTACGTC
289	TATGCGAGCAATGGGATCCGGATTC	TGAATCCGGATCCCATTGCTCGCAT
290	TAGAGTGAGGCCTCCCTGACCAGTG	TCACTGGTCAGGGAGGCCTCACTCT
291	TCGCACCGTAAGTAGATTTGCCCGC	TGCGGGCAAATCTACTTACGGTGCG
292	TTGAACCTTTGAGCACGTCGTGCGC	TGCGCACGACGTGCTCAAAGGTTCA
293	TTCCGCCTTTTTGGTTACCTCGAAG	TCTTCGAGGTAACCAAAAAGGCGGA
294	TGAACGCCAACGGCACTAACACATC	TGATGTGTTAGTGCCGTTGGCGTTC
295	TCCGACAGCAGCCAAGACGTCCCAG	TCTGGGACGTCTTGGCTGCTGTCGG
296	TCATAAAAAAACCTGGGGCTCTGCG	TCGCAGAGCCCCAGGTTTTTTTATG
297	TTGCCAACTGTGCAGACCGGACTTA	TTAAGTCCGGTCTGCACAGTTGGCA
298	TGGCGAAAGAGCGAAACCGGCTCGT	TACGAGCCGGTTTCGCTCTTTCGCC
299	TGGGATGCGTATTTTAGCGAACACG	TCGTGTTCGCTAAAATACGCATCCC
300	TTGGGATTCAGCGACCAGTACGCGA	TTCGCGTACTGGTCGCTGAATCCCA
301	TCCCGATATTCGCCCGGCCTATTCG	TCGAATAGGCCGGGCGAATATCGGG
302	TCGAGAAGATGCCTCACGCAACCAA	TTTGGTTGCGTGAGGCATCTTCTCG
303	TAACCTTGACCCGTGGATGACGCTA	TTAGCGTCATCCACGGGTCAAGGTT
6	TTTGCAACGGGCTGGTCAACGTCAA	TTTGACGTTGACCAGCCCGTTGCAA
7	TCGCATAGGTTGCCGATTTCGTCAA	TTTGACGAAATCGGCAACCTATGCG

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
306	TGCTTCCGGATGAACGGGATGGTTG	TCAACCATCCCGTTCATCCGGAAGC
307	TCCCTCCATGTTCTTCGAACGGTTT	TAAACCGTTCGAAGAACATGGAGGG
308	TTTGATGGGCGGCAATGCTCTTGCT	TAGCAAGAGCATTGCCGCCCATCAA
309	TATTGTGAGATGCGCCAAATTCCCC	TGGGGAATTTGGCGCATCTCACAAT
310	TTCAGCACAGCCAGACGGTCAACTT	TAAGTTGACCGTCTGGCTGTGCTGA
311	TACTCCACTCCTCGGTGGCAAACTA	TTAGTTTGCCACCGAGGAGTGGAGT
312	TTCTGGGCATGCCTGGACGGAGACG	TCGTCTCCGTCCAGGCATGCCCAGA
313	TTCTCAACTCCGGTACGACGAAACA	TTGTTTCGTCGTACCGGAGTTGAGA
314	TTTGCGTGGTCAAAGGCGCAACGTG	TCACGTTGCGCCTTTGACCACGCAA
315	TAGACAGCGATCCGCGGCTCATGAT	TATCATGAGCCGCGGATCGCTGTCT
316	TCGCGTCTCTAACTGAGAGCAGCCA	TTGGCTGCTCTCAGTTAGAGACGCG
317	TAGGCGCACATGTACGGACATTCAG	TCTGAATGTCCGTACATGTGCGCCT
318	TGATGAGTGGCACGTCGGTGTGTAA	TTTACACACCGACGTGCCACTCATC
319	TTGATCCATATTGTCGGACGTTGCG	TCGCAACGTCCGACAATATGGATCA
320	TACCTGCCGGGAGTTCATAGGCTAG	TCTAGCCTATGAACTCCCGGCAGGT
321	TAGCATTGGCGTTTTTCCGCAACGA	TTCGTTGCGGAAAAACGCCAATGCT
322	TGGTAATATTCAGCGCGACCGCTCA	TTGAGCGGTCGCGCTGAATATTACC
323	TATAGCGTACGACGAGGTGACGCGC	TGCGCGTCACCTCGTCGTACGCTAT
324	TTAGGTCACGATGCGTTTGACGCTA	TTAGCGTCAAACGCATCGTGACCTA
325	TACTGCCCGTACCTCTGGTTCTGGC	TGCCAGAACCAGAGGTACGGGCAGT
326	TCCTTTGGCCTGAAGTTGTCGTAGC	TGCTACGACAACTTCAGGCCAAAGG
327	TGTGCCCCACGAGCGTATCGTTGTA	TTACAACGATACGCTCGTGGGGCAC
328	TAGGCGCTACGTGGGCCTGGAGCAA	TTTGCTCCAGGCCCACGTAGCGCCT
329	TGGGTGCTACCATTGCATTAGTCCG	TCGGACTAATGCAATGGTAGCACCC
330	TACCACGCGCGTACGTGTAACCGAG	TCTCGGTTACACGTACGCGCGTGGT
331	TCCATGATGCATTGGGTGCATTTAG	TCTAAATGCACCCAATGCATCATGG
332	TGGTCCGGCCCTACGAAACGTTCGA	TTCGAACGTTTCGTAGGGCCGGACC
333	TCCGTGTGGCTGGAGATTCGTGTGA	TTCACACGAATCTCCAGCCACACGG
334	TGTTAGGGCGACGCATATTGGCACA	TTGTGCCAATATGCGTCGCCCTAAC
335	TGGGTCAGTCAGGTGCGTTAGGATC	TGATCCTAACGCACCTGACTGACCC
336	TGCCGTGAAGTCGAATGCAGATCGA	TTCGATCTGCATTCGACTTCACGGC
337	TGCCACCACCCAGTGCATTCAGGTA	TTACCTGAATGCACTGGGTGGTGGC
338	TGAGCTTAGTTTGCGGTCATCGGGC	TGCCCGATGACCGCAAACTAAGCTC
339	TTGTTTGCCGCCATTAGGGAGTAAC	TGTTACTCCCTAATGGCGGCAAACA
340	TGCTCCGCTGGATGTGCCGGTTTAG	TCTAAACCGGCACATCCAGCGGAGC
341	TCGGTAGCATGCGAGATCCCTGTTA	TTAACAGGGATCTCGCATGCTACCG
342	TCTACGCTCTACCAGTTGCCTGCGA	TTCGCAGGCAACTGGTAGAGCGTAG

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
343	TGTGCCTCCTGCTGTATTTGCCAAG	TCTTGGCAAATACAGCAGGAGGCAC
344	TTTGCGACTCGACTTGGACGAGTAG	TCTACTCGTCCAAGTCGAGTCGCAA
345	TTCTGGGAGCTGTTTACTCCAGCCA	TTGGCTGGAGTAAACAGCTCCCAGA
346	TTGCACGCGGAACTCCCTTTACCAT	TATGGTAAAGGGAGTTCCGCGTGCA
347	TTGGCAGCAAATGAATCGAAAGCAC	TGTGCTTTCGATTCATTTGCTGCCA
348	TAACTGGTGACGCGGTACAGCGAAG	TCTTCGCTGTACCGCGTCACCAGTT
349	TAGACGATTACGCTGGACGCCGTCG	TCGACGGCGTCCAGCGTAATCGTCT
350	TATGCCCTCCTTCATGGAAAGGGTT	TAACCCTTTCCATGAAGGAGGGCAT
351	TATTCTCGGAGCGTATGCGCCAGAA	TTTCTGGCGCATACGCTCCGAGAAT
352	TATAGCGGAGTTTGGGTACGCGAAC	TGTTCGCGTACCCAAACTCCGCTAT
353	TACCTACGCATACCGCTTGGCGAGG	TCCTCGCCAAGCGGTATGCGTAGGT
354	TGATTACCTGAATGGCCAAGCGAGC	TGCTCGCTTGGCCATTCAGGTAATC
355	TCCTGTTAGCATCACGGCGCTTAGG	TCCTAAGCGCCGTGATGCTAACAGG
356	TCGGAATGATGCGCTCGACAACGCT	TAGCGTTGTCGAGCGCATCATTCCG
357	TTGAGAGAGGCGTTGGTTAAGGCAA	TTTGCCTTAACCAACGCCTCTCTCA
358	TAAGCAGGCGAAGGGATACTCCTCG	TCGAGGAGTATCCCTTCGCCTGCTT
359	TTCACGACAGACGGGCCGAGATTAC	TGTAATCTCGGCCCGTCTGTCGTGA
360	TAAGCAATTTGGCCTCGTTTTGTGA	TTCACAAAACGAGGCCAAATTGCTT
361	TGCTGGTTGCGGTAGGATCGCATAT	TATATGCGATCCTACCGCAACCAGC
362	TTTGTGAATCCGTTCTGTCCCCGAC	TGTCGGGGACAGAACGGATTCACAA
363	TTGGGCTCCTCTGAGGCGAGATGGC	TGCCATCTCGCCTCAGAGGAGCCCA
364	TGGATAGAGTGAATCGACCGGCAAC	TGTTGCCGGTCGATTCACTCTATCC
365	TTGCACCGAACGTGCACGAGTAATT	TAATTACTCGTGCACGTTCGGTGCA
366	TGCCAGTATTCTCGGGTGTTGGACG	TCGTCCAACACCCGAGAATACTGGC
367	TTCGCTACCTAAGACCGGGCCATAC	TGTATGGCCCGGTCTTAGGTAGCGA
368	TTGGCATTGACGAGCAGCAGTCAGT	TACTGACTGCTGCTCGTCAATGCCA
369	TCGCGTCCCAGCGCCCTTGGAGTAT	TATACTCCAAGGGCGCTGGGACGCG
370	TATGAAGCCTACCGGGCGACTTCGT	TACGAAGTCGCCCGGTAGGCTTCAT
371	TCCAGACAGATGGCCTGGAACCATG	TCATGGTTCCAGGCCATCTGTCTGG
372	TTGGCGTGGGACCATCTCAAAGCTA	TTAGCTTTGAGATGGTCCCACGCCA
373	TCCGCATGGGAACACGTGTCAAGGT	TACCTTGACACGTGTTCCCATGCGG
374	TGCCCACTCGTCAGCTGGACGTAAT	TATTACGTCCAGCTGACGAGTGGGC
375	TATTACGGTCGTGATCCAGAAAGCG	TCGCTTTCTGGATCACGACCGTAAT
376	TTGCGAGGTGAGCACCTACGAGAGA	TTCTCTCGTAGGTGCTCACCTCGCA
377	TGGGCCGCATTCTTGATGTCCATTC	TGAATGGACATCAAGAATGCGGCCC
378	TCCTCGGATGTGGGCTCTCGCCTAG	TCTAGGCGAGAGCCCACATCCGAGG
379	TTAGGCATGTTGGCGTGAGCGCTAT	TATAGCGCTCACGCCAACATGGCTA

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
380	TCGATACGAACGAGGATGTCCGCCT	TAGGCGGACATCCTCGTTCGTATCG
381	TTACGCCGGTTAGCACGGTGCGCTA	TTAGCGCACCGTGCTAACCGGCGTA
382	TCATACGATGTCCGGGCCGTGTCGC	TGCGACACGGCCCGGACATCGTATG
383	TATCCGCAGTTGTATGGCGCGTTAT	TATAACGCGCCATACAACTGCGGAT
384	TGGGTAAGGGACAAAGATGGGATGG	TCCATCCCATCTTTGTCCCTTACCC
385	TATTGGAGTGTTTTGGTGAATCCGC	TGCGGATTCACCAAAACACTCCAAT
386	TGAACCGAGCCAACGTATGGACACG	TCGTGTCCATACGTTGGCTCGGTTC
387	TGCCGTCAAGCTTAAGGTTTTGGGC	TGCCCAAAACCTTAAGCTTGACGGC
388	TACCTGCTTTTGGGTGGGTGATATG	TCATATCACCCACCCAAAAGCAGGT
389	TAATCGTGGGCGCAGCAAACGTATA	TTATACGTTTGCTGCGCCCACGATT
390	TGTCGCCGGATTGCTCAGTATAAGC	TGCTTATACTGAGCAATCCGGCGAC
391	TACCCGTCGATGCTTCCTCCTCAGA	TTCTGAGGAGGAAGCATCGACGGGT
392	TATCCGGGTGGGCGATACAAGAGAT	TATCTCTTGTATCGCCCACCCGGAT
393	TTTCCGCATGAGTCAGCTTTGAAAA	TTTTTCAAAGCTGACTCATGCGGAA
394	TGCAAAGTCCCACTGGCAAGCCGAT	TATCGGCTTGCCAGTGGGACTTTGC
395	TCGACCTCGGCTTCATCGTACACAT	TATGTGTACGATGAAGCCGAGGTCG
396	TCTCATGAGCGCAGTTGTGCGTGAG	TCTCACGCACAACTGCGCTCATGAG
397	TCAGATGAAGGATCCACGGCCGGAG	TCTCCGGCCGTGGATCCTTCATCTG
398	TTCAAAGGCTCTTGGATACAGCCGT	TACGGCTGTATCCAAGAGCCTTTGA
399	TTCCGCTAATTTCCAATCAGGGCTC	TGAGCCCTGATTGGAAATTAGCGGA
8	TCCGTTTGCGGTCGTCCTTGCTCAA	TTTGAGCAAGGACGACCGCAAACGG
9	TTTCGCTTTCGTGGCTGCACTTCAA	TTTGAAGTGCAGCCACGAAAGCGAA
402	TCTTAGTTGGGGCGCGGTATCCAGA	TTCTGGATACCGCGCCCCAACTAAG
403	TGCTCTAATGCCGTGGAGTCGGAAC	TGTTCCGACTCCACGGCATTAGAGC
404	TCCGATTACAAATTGACTGACCGCA	TTGCGGTCAGTCAATTTGTAATCGG
405	TAGACGTACGTGAGCCTCCCGTGTC	TGACACGGGAGGCTCACGTACGTCT
406	TAATGGAGCGATACGATCCAACGCA	TTGCGTTGGATCGTATCGCTCCATT
407	TGGAGGCGCTGTACTGATAGGCGTA	TTACGCCTATCAGTACAGCGCCTCC
408	TTGTTTTTGAATTGACCACACGGGA	TTCCCGTGTGGTCAATTCAAAAACA
409	TCATGTCTGGATGCGCTCAATGAAG	TCTTCATTGAGCGCATCCAGACATG
410	TGCCCGCTAATCCGACACCCAGTTT	TAAACTGGGTGTCGGATTAGCGGGC
411	TCCATTGACAGGAGAGCCATGAGCC	TGGCTCATGGCTCTCCTGTCAATGG
412	TGAATCACCGAATCACCGACTCGTT	TAACGAGTCGGTGATTCGGTGATTC
413	TAACCAGCCGCAGTAGCTTACGTCG	TCGACGTAAGCTACTGCGGCTGGTT
414	TTTTTCTGAGGGACACGCGGGCGTT	TAACGCCCGCGTGTCCCTCAGAAAA
415	TGGTGCTCCGTTTGATCGATCCTCC	TGGAGGATCGATCAAACGGAGCACC
416	TCCGCTTAGGCCATACTCTGAGCCA	TTGGCTCAGAGTATGGCCTAAGCGG

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
417	TTAAGACATACCGACGCCCTTGCCT	TAGGCAAGGGCGTCGGTATGTCTTA
418	TGTTCCCGACGCCAGTCATTGAGAC	TGTCTCAATGACTGGCGTCGGGAAC
419	TTAAAAGTTTCGCGGAGGTCGGGCT	TAGCCCGACCTCCGCGAAACTTTTA
420	TCGGTCCAGACGAGCTGAGTTCGGC	TGCCGAACTCAGCTCGTCTGGACCG
421	TCGGCGTAGCGGCTACGGACTTAAA	TTTTAAGTCCGTAGCCGCTACGCCG
422	TGCTTGGATGCCCATGCGGCAAGGT	TACCTTGCCGCATGGGCATCCAAGC
423	TAGCGGGATCCCAGAGTTTCGAAAA	TTTTTCGAAACTCTGGGATCCCGCT
424	TGAGCTTGAGAGCGAGGTCATCCTC	TGAGGATGACCTCGCTCTCAAGCTC
425	TGCATCGGCCGTTTTGACCATATTC	TGAATATGGTCAAAACGGCCGATGC
426	TCATAGCGCTGCACGTTTCGACCGC	TGCGGTCGAAACGTGCAGCGCTATG
427	TACCCGACAACCACCAATTCAAAAA	TTTTTTGAATTGGTGGTTGTCGGGT
428	TGCGAACACTCATAAGAGCGCCCTG	TCAGGGCGCTCTTATGAGTGTTCGC
429	TCCGCCGAGTGTAGAGAGACTCCGA	TTCGGAGTCTCTCTACACTCGGCGG
430	TGACATCGGGAGCCGGAAACATGAG	TCTCATGTTTCCGGCTCCCGATGTC
431	TTCGTGTAGACTCGGCGACAGGCGT	TACGCCTGTCGCCGAGTCTACACGA
432	TATGCGCATATACTGACTGCGCAGG	TCCTGCGCAGTCAGTATATGCGCAT
433	TACAAGCGAACCCGAGTTTTGATGA	TTCATCAAAACTCGGGTTCGCTTGT
434	TGCATGAGACTCCGCGAAGACATGT	TACATGTCTTCGCGGAGTCTCATGC
435	TTCCTACATGTCGCGTCACGATCAC	TGTGATCGTGACGCGACATGTAGGA
436	TGACCGATCGCGAAGTCGTACACAT	TATGTGTACGACTTCGCGATCGGTC
437	TGTCGCCAGGACTGGGCCGATGTGA	TTCACATCGGCCCAGTCCTGGCGAC
438	TACCGATAAGACTTGCATCCGAACG	TCGTTCGGATGCAAGTCTTATCGGT
439	TTCCATAACCAGTCCGAAGTGCCGG	TCCGGCACTTCGGACTGGTTATGGA
440	TACGCGCCCTGCATCTCGTATTTAA	TTTAAATACGAGATGCAGGGCGCGT
441	TAGACCGCATCAATTGGCGCGTACC	TGGTACGCGCCAATTGATGCGGTCT
442	TAGAGGCTTGGCAAGTAGGGACCCT	TAGGGTCCCTACTTGCCAAGCCTCT
443	TGCAATGGACGCCAGACGATACCGG	TCCGGTATCGTCTGGCGTCCATTGC
444	TGCTGGACTTAGTCGTGTTCGGCGG	TCCGCCGAACACGACTAAGTCCAGC
445	TAGGCATCGTGCCGGATTGCTCCCT	TAGGGAGCAATCCGGCACGATGCCT
446	TTGCGCATGTCGACGTTGAACAAAG	TCTTTGTTCAACGTCGACATGCGCA
447	TTTCGGGTCACATCCGATGCCATAC	TGTATGGCATCGGATGTGACCCGAA
448	TACCCATCGCCGGAAAGCGATGTTG	TCAACATCGCTTTCCGGCGATGGGT
449	TAAGCGCTGACTCGGCTAAGAATCA	TTGATTCTTAGCCGAGTCAGCGCTT
450	TACTTCCAAGTCCTTGACCGTCCGA	TTCGGACGGTCAAGGACTTGGAAGT
451	TTCTCAATATTCCCGTAGTCGCCCA	TTGGGCGACTACGGGAATATTGAGA
452	TAACAGTTCCTCTTTTTCCTGGCGC	TGCGCCAGGAAAAAGAGGAACTGTT
453	TCGTCCTCCATGTTGTCACGAACAG	TCTGTTCGTGACAACATGGAGGACG

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
454	TTGCGCAGACCTACCTGTCTTTGCT	TAGCAAAGACAGGTAGGTCTGCGCA
455	TATGGACGGCTTCGCAGTCCTCCTT	TAAGGAGGACTGCGAAGCCGTCCAT
456	TTGAACGCTTTCTATGGGCCACGTA	TTACGTGGCCCATAGAAAGCGTTCA
457	TTGAACCCTGCCGCGAGCGATAACC	TGGTTATCGCTCGCGGCAGGGTTCA
458	TGTTCTTGCGCGATGAATCAGGACC	TGGTCCTGATTCATCGCGCAAGAAC
459	TAGGGTACGTGTCGCAGCTTCGCGT	TACGCGAAGCTGCGACACGTACCCT
460	TACCCTTGCTCCGCCATGTCTCTCA	TTGAGAGACATGGCGGAGCAAGGGT
461	TGGGACAAGGATTGAAGCTGGCGTC	TGACGCCAGCTTCAATCCTTGTCCC
462	TTGTCGTTGCTCCCGAGTACCATTG	TCAATGGTACTCGGGAGCAACGACA
463	TGTTGTCCGAGACGTTTGTGTCAGC	TGCTGACACAAACGTCTCGGACAAC
464	TGCTGGTGAACACTCACGAACCGCT	TAGCGGTTCGTGAGTGTTCACCAGC
465	TGCAGACAGGGCAAATCGGTGCAAA	TTTTGCACCGATTTGCCCTGTCTGC
466	TCCCATCACAACGAGTGGCGACTTT	TAAAGTCGCCACTCGTTGTGATGGG
467	TGCTTCTACAGCTGGCGTGCTAGCG	TCGCTAGCACGCCAGCTGTAGAAGC
468	TGAATGTGTGCCGACCATTCTAGCC	TGGCTAGAATGGTCGGCACACATTC
469	TCCAGCGGAAGTTAGAGCTCTGTGG	TCCACAGAGCTCTAACTTCCGCTGG
470	TTTTTTACCGACCACTCCATGTCGG	TCCGACATGGAGTGGTCGGTAAAAA
471	TGCGGCTATGTGATGACGGCCTAGC	TGCTAGGCCGTCATCACATAGCCGC
472	TAGTACACGGGCGTGTTAGCGCTCC	TGGAGCGCTAACACGCCCGTGTACT
473	TTCCTGTGTGGTGGCGCACTCCCAC	TGTGGGAGTGCGCCACCACACAGGA
474	TCCAACTAACCAATCGCGCGGATGA	TTCATCCGCGCGATTGGTTAGTTGG
475	TAGTGAGTGACCAAGGCAGGAGCAA	TTTGCTCCTGCCTTGGTCACTCACT
476	TCATCTTTCGCGGAGTTTATTGCGG	TCCGCAATAAACTCCGCGAAAGATG
477	TCTTCGTCCGGTTAGTGCGACAGCA	TTGCTGTCGCACTAACCGGACGAAG
478	TCTCACGAAAACGTGGGCCCGAAAT	TATTTCGGGCCCACGTTTTCGTGAG
479	TCGCAGCAGCTGAACTCTAGCATTG	TCAATGCTAGAGTTCAGCTGCTGCG
480	TAGGAGACATACGCCCAAATGGTGC	TGCACCATTTGGGCGTATGTCTCCT
481	TATTGAGAACTCGTGCGGGAGTTTG	TCAAACTCCCGCACGAGTTCTCAAT
482	TCTCTTTGTAGGCCCAGGAGGAGCA	TTGCTCCTCCTGGGCCTACAAAGAG
483	TGCCGCAGGGTCGATAATTGGTCTA	TTAGACCAATTATCGACCCTGCGGC
484	TAAACGCCGCCCTGAGACTATTGGG	TCCCAATAGTCTCAGGGCGGCGTTT
485	TCTGAGTTGCCTGGAACGTTGGACT	TAGTCCAACGTTCCAGGCAACTCAG
486	TCGGATGGGTTGCAGAGTATGGGAT	TATCCCATACTCTGCAACCCATCCG
487	TCTGACCTTTGGGGGTTAGTGCGGT	TACCGCACTAACCCCCAAAGGTCAG
488	TGGAAATGAGAACCTTACCCCAGCG	TCGCTGGGGTAAGGTTCTCATTTCC
489	TAACGCATCGTCCGTCAACTCATCA	TTGATGAGTTGACGGACGATGCGTT
490	TTGGAGAGAGACTTCGGCCATTGTT	TAACAATGGCCGAAGTCTCTCTCCA

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
491	TTTGCGCTCATTGGATCTTGTCAGG	TCCTGACAAGATCCAATGAGCGCAA
492	TAGCGCGTTAAAGCACGGCAACATT	TAATGTTGCCGTGCTTTAACGCGCT
493	TAGCCAGTAAACTGTGGGCGGCTGT	TACAGCCGCCCACAGTTTACTGGCT
494	TCGACTGATGTGCAACCAGCAGCTG	TCAGCTGCTGGTTGCACATCAGTCG
495	TGGTTGCTCATACGACGAGCGAGTG	TCACTCGCTCGTCGTATGAGCAACC
10	TGTCCAACGCGCAACTCCGATTCAA	TTTGAATCGGAGTTGCGCGTTGGAC
11	TTTGCCGCACCGTCCGTCATCTCAA	TTTGAGATGACGGACGGTGCGGCAA
498	TAGAACCTCCGCGCCTCCGTAGTAG	TCTACTACGGAGGCGCGGAGGTTCT
499	TAAAGGAGCTTTCGCCCAACGTACC	TGGTACGTTGGGCGAAAGCTCCTTT
500	TAGTGATTGTGCCACTCCACAGCTC	TGAGCTGTGGAGTGGCACAATCACT
501	TGCGATCGTCGAGGGTTGAGCTGAA	TTTCAGCTCAACCCTCGACGATCGC
502	TGGGAGACAGCCATTATGGTCCTCG	TCGAGGACCATAATGGCTGTCTCCC
503	TGAGACGCTGTCACTCCGGCAGAAC	TGTTCTGCCGGAGTGACAGCGTCTC
504	TCCACCGGTCGCTTAAGATGCACTT	TAAGTGCATCTTAAGCGACCGGTGG
505	TCGGCATAACGTCCAGTCCTGGGAC	TGTCCCAGGACTGGACGTTATGCCG
506	TAAGCGGAACGGGTTATACCGAGGT	TACCTCGGTATAACCCGTTCCGCTT
507	TTGCACACTAGGTCCGTCGCTTGAT	TATCAAGCGACGGACCTAGTGTGCA
508	TAGGGAACCGCGTTCAAACTCAGTT	TAACTGAGTTTGAACGCGGTTCCCT
509	TGAATTACAACCACCCGCTCGTGTT	TAACACGAGCGGGTGGTTGTAATTC
510	TTTCAGTGCTCACGAAGCATGGATT	TAATCCATGCTTCGTGAGCACTGAA
511	TTTAGTTTGGCGTTGGGACTTCACC	TGGTGAAGTCCCAACGCCAAACTAA
512	TAATGCGACCTCGACGAGCCTCATA	TTATGAGGCTCGTCGAGGTCGCATT
513	TCCGAAACCGTTAACGTGGCGCACA	TTGTGCGCCACGTTAACGGTTTCGG
514	TTAAAGTAACAAGGCGACCTCCCGC	TGCGGGAGGTCGCCTTGTTACTTTA
515	TTAATGATTTTAGTCGCGGGGTGGG	TCCCACCCCGCGACTAAAATCATTA
516	TGGCTACTCTAAGTGCCCGCTCAGG	TCCTGAGCGGGCACTTAGAGTAGCC
517	TTGGCGGACGACTCAATATCTCACG	TCGTGAGATATTGAGTCGTCCGCCA
518	TGGGCGTTAGGCGTAATAGACCGTC	TGACGGTCTATTACGCCTAACGCCC
519	TGCCACCTTTAGACGGCGGCTCTAG	TCTAGAGCCGCCGTCTAAAGGTGGC
520	TGAGATGTGTAAACGTGCAGGCACC	TGGTGCCTGCACGTTTACACATCTC
521	TTAGCTCGTGGCCCTCCAAGCGTGT	TACACGCTTGGAGGGCCACGAGCTA
522	TGTGTCGGCGCTATTTGGCCTTACC	TGGTAAGGCCAAATAGCGCCGACAC
523	TCCAGGGAAGCAACTGGTTGCCATT	TAATGGCAACCAGTTGCTTCCCTGG
524	TTTCCGAAACTAAGCCAGAACCGCT	TAGCGGTTCTGGCTTAGTTTCGGAA
525	TGCAAACCCGGTAACCCGAGAGTTC	TGAACTCTCGGGTTACCGGGTTTGC
526	TGCAAATGGCGTCATGCACGAACGT	TACGTTCGTGCATGACGCCATTTGC
527	TAGTACTTTCGCGCCCAGTTTAGGG	TCCCTAAACTGGGCGCGAAAGTACT

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
528	TAAGATCTGCGAGGCATCCCGGCTT	TAAGCCGGGATGCCTCGCAGATCTT
529	TGCAAGTGTATCGCACAGTGCGATT	TAATCGCACTGTGCGATACACTTGC
530	TCCGACAAGGCCTCAATTCATTCTG	TCAGAATGAATTGAGGCCTTGTCGG
531	TGTCTCGTCTCAACTTTAAGGCGCG	TCGCGCCTTAAAGTTGAGACGAGAC
532	TATCCAGAGATCCGTTTTGCAGCGT	TACGCTGCAAAACGGATCTCTGGAT
533	TGTCACCAGGAGGGAAGTTTCACCC	TGGGTGAAACTTCCCTCCTGGTGAC
534	TTTCCGTCAGGCGGATCAACGGAAT	TATTCCGTTGATCCGCCTGACGGAA
535	TATGCCGGACACGCATTACACAGGC	TGCCTGTGTAATGCGTGTCCGGCAT
536	TTGGGCCGCTTGGCGCTTTCATAGA	TTCTATGAAAGCGCCAAGCGGCCCA
537	TCCTAGCGCGAGCTTTACTGACCAG	TCTGGTCAGTAAAGCTCGCGCTAGG
538	TTTGGCCAGGAATATGGTCTCGAGA	TTCTCGAGACCATATTCCTGGCCAA
539	TGTCTGCGGCCGACTTGCTATGCAT	TATGCATAGCAAGTCGGCCGCAGAC
540	TAACTTGCTCATTCTCAAGCCGACG	TCGTCGGCTTGAGAATGAGCAAGTT
541	TACGTCAGCGATTGTGGCGAAATAT	TATATTTCGCCACAATCGCTGACGT
542	TACGGCCTGCGTCAGCAGATGCATC	TGATGCATGTGCTGACGCAGGCCGT
543	TATACCTCCGCAGAACCATTCCGTT	TAACGGAATGGTTCTGCGGAGGTAT
544	TAGTTCGCGGTCCCACGATTCACTT	TAAGTGAATCGTGGGACCGCGAACT
545	TTGCTCAATTTGTGCAGAAAACGCC	TGGCGTTTTCTGCACAAATTGAGCA
546	TTTATCGCGAGAGACGACCGTGTCC	TGGACACGGTCGTCTCTCGCGATAA
547	TGACGCGACGTGAGTAGTGGAAGCG	TCGCTTCCACTACTCACGTCGCGTC
548	TATGGTAGGGGCATTGGGCTTTCCT	TAGGAAAGCCCAATGCCCCTACCAT
549	TCCAAATATAGCCGCGCGGAGACAT	TATGTCTCCGCGCGGCTATATTTGG
550	TGCAAACCCTGATTGAATCGTGCCC	TGGGCACGATTCAATCAGGGTTTGC
551	TTAGCGTCTTGCGTGAAACCATGGG	TCCCATGGTTTCACGCAAGACGCTA
552	TCCACCCCGACAGCGCTGGACTCTT	TAAGAGTCCAGCGCTGTCGGGGTGG
553	TACGAGCACTGAAGGCTGCTTTACG	TCGTAAAGCAGCCTTCAGTGCTCGT
554	TCATATCAGCGTCGTCTAGCTCGCG	TCGCGAGCTAGACGACGCTGATATG
555	TTGATCCCGGACCGGCTAGACTAAT	TATTAGTCTAGCCGGTCCGGGATCA
556	TGGCCCCGACACTACAGGGTAATCA	TTGATTACCCTGTAGTGTCGGGGCC
557	TGGCTCCAGGGCGAGATTATGAATG	TCATTCATAATCTCGCCCTGGAGCC
558	TCAAAATCCGATGGGCGGAAAATTA	TTAATTTTCCGCCCATCGGATTTTG
559	TCACAGGCGCATAGGGAGCAAGCTA	TTAGCTTGCTCCCTATGCGCCTGTG
560	TTAGCTATTGCCCCGATGGGCTACT	TAGTAGCCCATCGGGGCAATAGCTA
561	TTGGTACGCGGTCCATAGCAAGTCG	TCGACTTGCTATGGACCGCGTACCA
562	TGACGCTGTGGCTCGGAAACTGTTC	TGAACAGTTTCCGAGCCACAGCGTC
563	TCCTGGGTTCGCCGCGTGGTAACTG	TCAGTTACCACGCGGCGAACCCAGG
564	TTTCCCGCGTAGCCCAACAGCTATA	TTATAGCTGTTGGGCTACGCGGGAA

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
565	TTTCGCGGATTGCTGCCGCATAACA	TTGTTATGCGGCAGCAATCCGCGAA
566	TAAAAATGGCACCGAAGTTGAGGCA	TTGCCTCAACTTCGGTGCCATTTTT
567	TCATTCCGCGCGAGTTGAAATCCAG	TCTGGATTTCAACTCGCGCGGAATG
568	TACGCACGTTTTTTGGCACGGTTAA	TTTAACCGTGCCAAAAAACGTGCGT
569	TTGTCCATGACGTCGTTTCTCTGGT	TACCAGAGAAACGACGTCATGGACA
570	TTCTCAGTCGGACTCGTATGCCAGA	TTCTGGCATACGAGTCCGACTGAGA
571	TCTCCAAACGCACACATCAAGCATC	TGATGCTTGATGTGTGCGTTTGGAG
572	TTTCAACCAAGCGGGGTGTTCGTGA	TTCACGAACACCCCGCTTGGTTGAA
573	TGGTGTCGGAGGGTGGTGACCTCGA	TTCGAGGTCACCACCCTCCGACACC
574	TAGCGCTTTTGGTCATGATTTGCAA	TTTGCAAATCATGACCAAAAGCGCT
575	TCCGAGGACTTACGTCTGCCCAGGA	TTCCTGGGCAGACGTAAGTCCTCGG
576	TGCCCAATCCAGTTCTTATGCGCCC	TGGGCGCATAAGAACTGGATTGGGC
577	TCGGGTTAACCCACGCAAGTTATGA	TTCATAACTTGCGTGGGTTAACCCG
578	TTGATTAGCGCTCAATACACGCGTG	TCACGCGTGTATTGAGCGCTAATCA
579	TAAGGGCAGACCTTTGGTTCGACTG	TCAGTCGAACCAAAGGTCTGCCCTT
580	TGCGCCACAAGATTCACATGTCATT	TAATGACATGTGAATCTTGTGGCGC
581	TGCCATGTTCAAGGGCCTTTCGAAG	TCTTCGAAAGGCCCTTGAACATGGC
582	TCGCGGTGTTTTGTCTAGGTGCCGG	TCCGGCACCTAGACAAAACACCGCG
583	TCAACATTGTGGTGGCACTCCATCC	TGGATGGAGTGCCACCACAATGTTG
584	TCGATACGCGCCGGTTTGTTAAATC	TGATTTAACAAACCGGCGCGTATCG
585	TGGCTATAAACGTGCGGACTGCTCC	TGGAGCAGTCCGCACGTTTATAGCC
586	TTGGGTAAATCACTATTGCGCGGTT	TAACCGCGCAATAGTGATTTACCCA
587	TGTCTTCATCGGCCCGCGCAAGCTA	TTAGCTTGCGCGGGCCGATGAAGAC
588	TGCGACACACCCTGTACTCTGATGC	TGCATCAGAGTACAGGGTGTGTCGC
589	TGTAGCAGGGTCCGCAAGACCAAGC	TGCTTGGTCTTGCGGACCCTGCTAC
590	TTCGCCAACGCAGGGTAACTGCCAT	TATGGCAGTTACCCTGCGTTGGCGA
591	TACTCCGAAGCTTCGAGCGGCACGA	TTCGTGCCGCTCGAAGCTTCGGAGT
12	TCATCGTCCCTTTCGATGGGATCAA	TTTGATCCCATCGAAAGGGACGATG
13	TGCACGGGAGCTGACGACGTGTCAA	TTTGACACGTCGTCAGCTCCCGTGC
594	TATCATCCCACGGCAGAGTGAAGAG	TCTCTTCACTCTGCCGTGGGATGAT
595	TCGCTGGACTGGCCTATCCGAGTCG	TCGACTCGGATAGGCCAGTCCAGCG
596	TCGGTCTCAGCAACACTGTCGCAAA	TTTTGCGACAGTGTTGCTGAGACCG
597	TCGAACGTTCTCCGATGTAATGGCC	TGGCCATTACATCGGAGAACGTTCG
598	TATACCGTGCGACAAGCCCCTCTGA	TTCAGAGGGGCTTGTCGCACGGTAT
599	TAGCTCATTCCCGAGACGGAACACC	TGGTGTTCCGTCTCGGGAATGAGCT
600	TTTTCATGCGGCCGTTGCAAATCAT	TATGATTTGCAACGGCCGCATGAAA
601	TACTCGAACGGACGTTCAATTCCCA	TTGGGAATTGAACGTCCGTTCGAGT

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
602	TCTGCATGGTGTGGGTGAGACTCCC	TGGGAGTCTCACCCACACCATGCAG
603	TCCGCGAGTGTGGATGGCGTGTTGA	TTCAACACGCCATCCACACTCGCGG
604	TAATGTGTCGGTCCTAAGCCGGGTG	TCACCCGGCTTAGGACCGACACATT
605	TTAAGACGAGCCTGCACAGCTTGCG	TCGCAAGCTGTGCAGGCTCGTCTTA
606	TGGCGTGGGAGGATAAGACGATGTC	TGACATCGTCTTATCCTCCCACGCC
607	TTGCTCCATGTTAGGAACGCACCAC	TGTGGTGCGTTCCTAACATGGAGCA
608	TCGGTGTTGGTCGGACTGACGACTG	TCAGTCGTCAGTCCGACCAACACCG
609	TCCGCGCGTATCTATCAGATCTGGG	TCCCAGATCTGATAGATACGCGCGG
610	TAAAGCATGCTCCACCTGGAGCGAG	TCTCGCTCCAGGTGGAGCATGCTTT
611	TACTTGCATCGCTGGGTAGATCCGG	TCCGGATCTACCCAGCGATGCAAGT
612	TTGCTTACGCAGTGGATTGGTCAGA	TTCTGACCAATCCACTGCGTAAGCA
613	TATGCAGATGAACAAATCGCCGAAT	TATTCGGCGATTTGTTCATCTGCAT
614	TGCAATTCTGGGCCATGTATTCGTC	TGACGAATACATGGCCCAGAATTGC
615	TAGGGTTCCTTACGCGTCGACATGG	TCCATGTCGACGCGTAAGGAACCCT
616	TGTGGAGCTAATCGCGAGCCTCAGA	TTCTGAGGCTCGCGATTAGCTCCAC
617	TTCGTAGTCTCACCGGCAATGATCC	TGGATCATTGCCGGTGAGACTACGA
618	TTTATAGCAGTGCGCCAATGCTTCG	TCGAAGCATTGGCGCACTGCTATAA
619	TCGAACAGTGCTGTCCGTCGCTCAA	TTTGAGCGACGGACAGCACTGTTCG
620	TTCCGCGTGGACTGTTAGACGCTAT	TATAGCGTCTAACAGTCCACGCGGA
621	TCATTAGCCCGCTGTCGGTAACTGT	TACAGTTACCGACAGCGGGCTAATG
622	TGGAAAGAAACTCAGACGCGCAATG	TCATTGCGCGTCTGAGTTTCTTTCC
623	TCGACTCGCTGGACAGGAGAATCGT	TACGATTCTCCTGTCCAGCGAGTCG
624	TCATGATCCTCTGTTTCACCCGCGG	TCCGCGGGTGAAACAGAGGATCATG
625	TGGCGTAGCGCTCTAAAAGCTTCGG	TCCGAAGCTTTTAGAGCGCTACGCC
626	TAGTGATGCCATCAGGCCCGTATAC	TGTATACGGGCCTGATGGCATCACT
627	TTATGGAAAGGGCAACAGCGCTATC	TGATAGCGCTGTTGCCCTTTCCATA
628	TCTGTGGTTGATGGAGGATCCACAC	TGTGTGGATCCTCCATCAACCACAG
629	TACTCGCTGGAATTTGCGCTGACAC	TGTGTCAGCGCAAATTCCAGCGAGT
630	TCAGGCCCGAACCACGCGGTTACAG	TCTGTAACCGCGTGGTTCGGGCCTG
631	TGGCGCAATGGGCGCATAAATACTA	TTAGTATTTATGCGCCCATTGCGCC
632	TGGTCAATTCGCGCTACATGCCCTA	TTAGGGCATGTAGCGCGAATTGACC
633	TGATGGTGGACTGGAGCCCTTCCGC	TGCGGAAGGGCTCCAGTCCACCATC
634	TCCGCGCATAGCGCAATAGGGGAGA	TTCTCCCCTATTGCGCTATGCGCGG
635	TTCTTCTGGCTGTCCGGCACCCGAA	TTTCGGGTGCCGGACAGCCAGAAGA
636	TGCGTTCGCAATTCACGGGCCCTTA	TTAAGGGCCCGTGAATTGCGAACGC
637	TTCGTTTCGGCCTTGGAGAGTATCG	TCGATACTCTCCAAGGCCGAAACGA
638	TAGGTGCAAGTGCAAGGCGAGAGGC	TGCCTCTCGCCTTGCACTTGCACCT

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
639	TCGCCAGTTTCGATGGCTGACGTTT	TAAACGTCAGCCATCGAAACTGGCG
640	TGCTTTACCGCCGATCCCAGATATC	TGATATCTGGGATCGGCGGTAAAGC
641	TGTGCTTGACGAAGAGGCGAAATGT	TACATTTCGCCTCTTCGTCAAGCAC
642	TCAGTCCGTGCGCTTCATGTCCTCA	TTGAGGACATGAAGCGCACGGACTG
643	TTACGCGTAAGAGCCTACCCTCGCG	TCGCGAGGGTAGGCTCTTACGCGTA
644	TGGCGAGTCTTGTGGGGACATGTGT	TACACATGTCCCCACAAGACTCGCC
645	TCCAAAGCGAAGCGAGCGTGTCTAT	TATAGACACGCTCGCTTCGCTTTGG
646	TGCCGTAGGTTGCTCTTCACCGAAC	TGTTCGGTGAAGAGCAACCTACGGC
647	TAAATCCGCGATGTGCCGTGAGGCT	TAGCCTCACGGCACATCGCGGATTT
648	TGGCTTCGCACCCGTACCAATTTAG	TCTAAATTGGTACGGGTGCGAAGCC
649	TTGTAGAGTCCCACGTAGCCGGCAT	TATGCCGGCTACGTGGGACTCTACA
650	TCACTAGTCTGGGGCAAGGTGCATT	TAATGCACCTTGCCCCAGACTAGTG
651	TTGTACTCGGCAGGCGCAATAGATT	TAATCTATTGCGCCTGCCGAGTACA
652	TAACGGGTATCGGAAGCGTAAAAGC	TGCTTTTACGCTTCCGATACCCGTT
653	TCGGACTGCCCGTTTGCAAGTTGAG	TCTCAACTTGCAAACGGGCAGTCCG
654	TATCGTTCAGCACTGGAGCCCGTAA	TTTACGGGCTCCAGTGCTGAACGAT
655	TATGCATCGAACTAGTCGTGACGGC	TGCCGTCACGACTAGTTCGATGCAT
656	TTTCCAGGCATTAAGGAGAGGGAGC	TGCTCCCTCTCCTTAATGCCTGGAA
657	TGTGCGACATCTACTCCACGATCCC	TGGGATCGTGGAGTAGATGTCGCAC
658	TCTCATCGTCCTAACACGAGAGCCC	TGGGCTCTCGTGTTAGGACGATGAG
659	TAATGGCACTTCGGCGGTGATGCAA	TTTGCATCACCGCCGAAGTGCCATT
660	TCCGTGGGAGGGAATCCAACCGAGG	TCCTCGGTTGGATTCCCTCCCACGG
661	TAAATTCTCGTTGGTGACGGCTCAT	TATGAGCCGTCACCAACGAGAATTT
662	TTTGCTCTTATCCTTGTCCTGGGCG	TCGCCCAGGACAAGGATAAGAGCAA
663	TTTAAGGATCAGGCGGAGCTTGCAG	TCTGCAAGCTCCGCCTGATCCTTAA
664	TCGCGACTAAGGTGCTGCAACTCGA	TTCGAGTTGCAGCACCTTAGTCGCG
665	TGCTCGATTTCACGGCCCGTTGTTC	TGAACAACGGGCCGTGAAATCGAGC
666	TAGCAGAGTGCGTTGCAGAGGCTAA	TTTAGCCTCTGCAACGCACTCTGCT
667	TTGGAGGTGAGGACGACGTGCACTA	TTAGTGCACGTCGTCCTCACCTCCA
668	TAACCGTTTAGGGTACATTCGCGGT	TACCGCGAATGTACCCTAAACGGTT
669	TTATGATCGCTCGGCTCACAGTTTG	TCAAACTGTGAGCCGAGCGATCATA
670	TGACTTTTTGCGGAAACGTCATGGT	TACCATGACGTTTCCGCAAAAAGTC
671	TTGTCGGTTATTCCACCTGCAAGGA	TTCCTTGCAGGTGGAATAACCGACA
672	TCTATGGTTTGCACTGCGCCGTCGA	TTCGACGGCGCAGTGCAAACCATAG
673	TAGCAGGGAAATTCAATCGTTCGCA	TTGCGAACGATTGAATTTCCCTGCT
674	TCCTAACCGAGCGCTTAGCATTTCC	TGGAAATGCTAAGCGCTCGGTTAGG
675	TCCCGACCCTAACTCGCATTGAATA	TTATTCAATGCGAGTTAGGGTCGGG

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
676	TTTGCTTAATGGTGACGCCACGGAT	TATCCGTGGCGTCACCATTAAGCAA
677	TGATGCTCGCCGTGTTTAGTTCACG	TCGTGAACTAAACACGGCGAGCATC
678	TTCGGATGACGAGTTTCCATGACGG	TCCGTCATGGAAACTCGTCATCCGA
679	TATGCGGTCTACTTTCTCGATCGGG	TCCCGATCGAGAAAGTAGACCGCAT
680	TTTGCGAGGCTAAGCACACGGTAAA	TTTTACCGTGTGCTTAGCCTCGCAA
681	TAACTTAATTACCGCCTCTGGCGCC	TGGCGCCAGAGGCGGTAATTAAGTT
682	TGTGACCGCGAACTTGTTCCGACAG	TCTGTCGGAACAAGTTCGCGGTCAC
683	TTGCGGATTACCGATTCGCTCTTAA	TTTAAGAGCGAATCGGTAATCCGCA
684	TTGATAGGGGGCCACGTTGATCAGA	TTCTGATCAACGTGGCCCCCTATCA
685	TTCGCTCCGTAGCGATTCATCGTAG	TCTACGATGAATCGCTACGGAGCGA
686	TTGTCAGCTGGTAGCCTCCGTTTGA	TTCAAACGGAGGCTACCAGCTGACA
687	TAGCGTCGCATGACGCTTACGGCAC	TGTGCCGTAAGCGTCATGCGACGCT
14	TAGACGCACCGCAACAGGCTGTCAA	TTTGACAGCCTGTTGCGGTGCGTCT
15	TCGTGTAGGGGTCCCGTGCTGTCAA	TTTGACAGCACGGGACCCCTACACG
690	TGTCGCATTCTGCACTGGCTTCGCC	TGGCGAAGCCAGTGCAGAATGCGAC
691	TTGATTAGGTGCGGTCCCGTAGTCC	TGGACTACGGGACCGCACCTAATCA
692	TAAGGGACCTTGGGTGACGGCGAGA	TTCTCGCCGTCACCCAAGGTCCCTT
693	TTCAAATGGCCACCGCGTGTCATTC	TGAATGACACGCGGTGGCCATTTGA
694	TCTCCGACGACCAATAAATAGCCGC	TGCGGCTATTTATTGGTCGTCGGAG
695	TGGCTATTCCCGTAGAGAGCGTCCA	TTGGACGCTCTCTACGGGAATAGCC
696	TTGGATAACCTCTCGGTCCATCCAC	TGTGGATGGACCGAGAGGTTATCCA
697	TGACCGCTGTACGGGAGTGTGCCTT	TAAGGCACACTCCCGTACAGCGGTG
698	TGCCACAGAGTTTTAGCAGGGACCC	TGGGTCCCTGCTAAAACTCTGTGGC
699	TCCCACGCTTTCCGACCACTGACCT	TAGGTCAGTGGTCGGAAAGCGTGGG
700	TCATTGACACAATGCGGGGACTGAT	TATCAGTCCCCGCATTGTGTCAATG
701	TAGCCACTCGACAGGGTTCCAAAGC	TGCTTTGGAACCCTGTCGAGTGGCT
702	TCAGGATGAGCAAAGCGACTCTCCA	TTGGAGAGTCGCTTTGCTCATCCTG
703	TCAAGGTATGGTCTGGGGCCTAAGG	TGCTTAGGCCCCAGACCATACCTTG
704	TGGTGTTCGGCCTAAACTCTTTCGG	TCCGAAAGAGTTTAGGCCGAACACC
705	TTTTAGTCGGACCCTGTGGCAATTC	TGAATTGCCACAGGGTCCGACTAAA
706	TCACACGTTTCCGACCAGCCTGAAC	TGTTCAGGCTGGTCGGAAACGTGTG
707	TCTGGACGAACTGGCTTCCTCGTAC	TGTACGAGGAAGCCAGTTCGTCCAG
708	TTTCACAATCCGCCGAAAACTGACC	TGGTCAGTTTTCGGCGGATTGTGAA
709	TAACAGGATATCCGCGATCACGACA	TTGTCGTGATCGCGGATATCCTGTT
710	TTACGTCGGATCCATTGCGCCGAGT	TACTCGGCGCAATGGATCCGACGTA
711	TCATGGATCTCTCGGTTTGATCGCC	TGGCGATCAAACCGAGAGATCCATG
712	TAGCCAGGCGCGTATATACGCTCGG	TCCGAGCGTATATACGCGCCTGGCT

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
713	TATTTGGCACGTGTCGTGCCATGTT	TAACATGGCACGACACGTGCCAAAT
714	TCCGCGTTGCACCACTTTGAGGTGC	TGCACCTCAAAGTGGTGCAACGCGG
715	TTTGGACGTGACAAGCATGGCGCTC	TGAGCGCCATGCTTGTCACGTCCAA
716	TCTGAATCGCGCAAGTAAATGGGGG	TCCCCCATTTACTTGCGCGATTCAG
717	TGATAAGGTCCACCAGATTGCGCGC	TGCGCGCAATCTGGTGGACCTTATC
718	TCTAACAATTGCCAACCGGGACGGC	TGCCGTCCCGGTTGGCAATTGTTAG
719	TGGTAACCTGGGTGCTTGCAGGTTA	TTAACCTGCAAGCACCCAGGTTACC
720	TATCGGAGCCACCATTCGCATTGGG	TCCCAATGCGAATGGTGGCTCCGAT
721	TGTGAACTGGCTTGCCCCAGGATTA	TTAATCCTGGGGCAAGCCAGTTCAC
722	TAGGCGATAGCATGGTCCCATATGA	TTCATATGGGACCATGCTATCGCCT
723	TAACGGTATCGTGGCTAATGCACGA	TTCGTGCATTAGCCACGATACCGTT
724	TAGTAGTGGTCCTCCAGATCGGCAA	TTTGCCGATCTGGAGGACCACTACT
725	TCCGTTGAATTGGACGGGAGGTTAG	TCTAACCTCCCGTCCAATTCAACGG
726	TGCATAAGTGCGGCATCGCGAAGGG	TCCCTTCGCGATGCCGCACTTATGC
727	TCGACAAGATGCAGCTGCTACATGC	TGCATGTAGCAGCTGCATCTTGTCG
728	TTCGCAGTGATTCCCGACCGATAAG	TCTTATCGGTCGGGAATCACTGCGA
729	TCAAGGCGAGTCCACTCGAGGGGAC	TGTCCCCTCGAGTGGACTCGCCTTG
730	TGCAACTTGCACGGCATAAGTGGGC	TGGCCACTTATGCCGTGCAAGTTGC
731	TTCCGAGCTTGACGTTCGCGACGTC	TGACGTCGCGAACGTCAAGCTCGGA
732	TAGCGCTGGGCTGTGCTGCCATCTC	TGAGATGGCAGCACAGCCCAGCGCT
733	TTTCATGTCGCTGAGTAACCCTCGC	TGCGAGGGTTACTCAGCGACATGAA
734	TCGAACCGCTAATGCCCATTGTCAG	TCTGACAATGGGCATTAGCGGTTCG
735	TCACGGAAGGTGGGACAAATCGCCG	TCGGCGATTTGTCCCACCTTCCGTG
736	TCACAGATGGAGACAAACGCGCCTT	TAAGGCGCGTTTGTCTCCATCTGTG
737	TTTTTCGCAACTCGCTCCATAACCC	TGGGTTATGGAGCGAGTTGCGAAAA
738	TACGTTACGTTTCCGGCGCCTCTAA	TTTAGAGGCGCCGGAAACGTAACGT
739	TTATCGGATTGCGTGGGTTTCAATC	TGATTGAAACCCACGCAATCCGATA
740	TCTTCCACAATTGTCTGCGACGCAC	TGTGCGTCGCAGACAATTGTGGAAG
741	TTGCACAAAGGTATGGCTGTCCGGC	TGCCGGACAGCCATACCTTTGTGCA
742	TTCCGATGCCAGTCCCATCTTAAGA	TTCTTAAGATGGGACTGGCATCGGA
743	TCTGAAACCGTGCGAATCGAGGTGA	TTCACCTCGATTCGCACGGTTTCAG
744	TCGGTGTTCCGCGTGTCGAAAAAAT	TATTTTTTCGACACGCGGAACACCG
745	TTCTAGCAGGCCTTTTGAATCGCCA	TTGGCGATTCAAAAGGCCTGCTAGA
746	TGAGTCACCTCTGAGACGGACGCCA	TTGGCGTCCGTCTCAGAGGTGACTC
747	TTCTTCTGTCATCCTGCAGCAGCAT	TATGCTGCTGCAGGATGACAGAAGA
748	TGCGGATGAAACCTGAAAGGGGCCT	TAGGCCCCTTTCAGGTTTCATCCGC
749	TGGGGCCCCAAACTGGTATCAAGCC	TGGCTTGATACCAGTTTGGGGCCCC

TABLE 4-continued

Seq. ID No.	Decoder Sequence (5'-3') + 5' T	Probe Sequence (5'-3') + 5' T
750	TGCATTGGCTTCGGATTCTCCTACA	TTGTAGGAGAATCCGAAGCCAATGC
751	TAGGCGGCCCAACTGTGAGGTCTTG	TCAAGACCTCACAGTTGGGCCGCCT
752	TACACCATGTGCTCCGCGCTGCAGT	TACTGCAGCGCGGAGCACATGGTGT
753	TACGATGAACATGAATCGGGAGTCG	TCGACTCCCGATTCATGTTCATCGT
754	TCTGCATCCCTGTAGCAGCGCTCCG	TCGGAGCGCTGCTACAGGGATGCAG
755	TGTGCCGTATTTCGACCTGTGCGTT	TAACGCACAGGTCGAAATACGGCAC
756	TGCAGTGCGCACTTCAGTTCAAAAG	TCTTTTGAACTGAAGTGCGCACTGC
757	TGCGATTTTAAGCGATGCCTTGACG	TCGTCAAGGCATCGCTTAAAATCGC
758	TTAGGTGACCTAGGCTTGCTTGCGG	TCCGCAAGCAAGCCTAGGTCACCTA
759	TCTGGATACCTTGCCTGTGCGGCGC	TGCGCCGCACAGGCAAGGTATCCAG
760	TCCCCTTACGGCTCGTCGTCTATGC	TGCATAGACGACGAGCCGTAAGGGG
761	TGCGCTTGCCCGATGCGATGCATTA	TTAATGCATCGCATCGGGCAAGCGC
762	TTTTCTGTAAGCGGCCTGGGGTTCA	TTGAACCCCAGGCCGCTTACAGAAA
763	TGGCTGAGGTGAGCGGTAAGGATGA	TTCATCCTTACCGCTCACCTCAGCC
764	TTCTTGGCCTCCCCGATCTAATTTG	TCAAATTAGATCGGGGAGGCCAAGA
765	TGGAGGTAACGCCGTGTACGTAGGA	TTCCTACGTACACGGCGTTACCTCC
766	TGTAATCCATTTGTGGCTGCGTCAA	TTTGACGCAGCCACAAATGGATTAC
767	TCAAACCCATTCCAGCAGACGCCTG	TCAGGCGTCTGCTGGAATGGGTTTG
768	TTAGGAGGAATTTGGCATGCGGGCG	TCGCCCGCATGCCAAATTCCTCCTA
769	TATAGGTAGGATGTGCCCGGCGTTG	TCAACGCCGGGCACATCCTACCTAT
770	TGCAAGTGCTTAGCTCGTCAGCCTC	TGAGGCTGACGAGCTAAGCACTTGC
771	TCTGGCTGTGTCGCATCTCGTTAAC	TGTTAACGAGATGCGACACAGCCAG
772	TCTAACGTCGTCTCGCGCAATCACT	TAGTGATTGCGCGAGACGACGTTAG
773	TTTTTCATAAACGTTGTCCCCGAGC	TGCTCGGGGACAACGTTTATGAAAA
774	TAGCAGGAGGACGAACCTCCGCTCC	TGGAGCGGAGGTTCGTCCTCCTGCT
775	TTTCAAGCACCATCGTGCAATCCAA	TTTGGATTGCACGATGGTGCTTGAA
776	TAGCGTCGCCAGTGATCGCTAGTGG	TCCACTAGCGATCACTGGCGACGCT
777	TTACATTCCCTGCCTCCGTGGGCTT	TAAGCCCACGGAGGCAGGGAATGTA
778	TCGCTTCGCGTATTCAGTAGCGGTT	TAACCGCTACTGAATACGCGAAGCG
779	TTCGGACGCGTCGACACTCATTATA	TTATAATGAGTGTCGACGCGTCCGA
780	TTCTGAGCAGGCCAGCGCTCCAGCT	TAGCTGGAGCGCTGGCCTGCTCAGA
781	TTTGAATTGCCAAGCCCTGAAAGCC	TGGCTTTCAGGGCTTGGCAATTCAA
782	TAGTTTTCGCCTTGATGCGTCGGTG	TCACCGACGCATCAAGGCGAAAACT
783	TGTTTCATAGGCCACGCGTGCTAAA	TTTTAGCACGCGTGGCCTATGAAAC
16	TCATCGCTGCAAGTACCGCACTCAA	TTTGAGTGCGGTACTTGCAGCGATG

We claim:

1. An oligonucleotide array comprising an array of at least 25 different addresses, each address comprising a different capture probe selected from the group consisting of the sequences set forth in Table 1, Table 2, Table 3 and Table 4.

2. An array according to claim 1, wherein said capture probes are microspheres.

3. An array according to claim 1 or **2** wherein said array is a liquid array.

4. An array according to claim 1 or **2**, wherein said array further comprises a solid support.

5. An array according to claim 1, wherein said addresses are microspheres and wherein said solid support comprises wells into which said microspheres are individually distributed.

6. An array according to claim 1, wherein each address is a different known location, and said wherein each capture probe is attached to one of said known locations.

7. An array according to claim 1, wherein said array comprises at least 50 different addresses, each address comprising a different capture probe selected from the group consisting of the sequences set forth in Table 1, Table 2, Table 3 and Table 4.

8. An array according to claim 1 wherein said array comprises at least 100 different addresses, each address comprising a different capture probe selected from the group consisting of the sequences set forth in Table 1, Table 2, Table 3 and Table 4.

9. A kit comprising at least twenty-five nucleic acids selected from the group consisting of sequences substantially complementary to the sequences set forth in Table I, Table II, Table III and Table IV or their complement.

10. A kit according to claim 9, wherein said kit comprises at least 50 nucleic acids selected from the group consisting of the sequences substantially complementary to the sequences set forth in Table I, Table II, Table III and Table IV or their complement.

11. A kit according to claim 9, wherein said kit comprises at least 100 nucleic acids selected from the group consisting of the sequences substantially complementary to the sequences set forth in Table I, Table II, Table III and Table IV or their complement.

12. A kit according to claim 9, wherein said nucleic acids further comprise at least a first universal priming sequence.

13. A kit according to claim 9, wherein said nucleic acid sequence further comprises a sequence substantially complementary to a target domain.

14. A method of immobilizing a target nucleic acid sequence, said method comprising:

a) attaching a first adapter nucleic acid to a first target nucleic acid sequence to form a modified first target nucleic acid sequence, wherein said first adapter nucleic acid comprises a sequence substantially complementary to a sequence selected from the sequences set forth in Table I, Table II, Table III, and Table IV;

b) contacting said modified first target nucleic acid sequence with an array comprising an array of at least 25 different addresses, each address comprising a different capture probe selected from the group consisting of the sequences set forth in Table 1, Table 2, Table 3 and Table 4, whereby said target nucleic acid sequence is immobilized.

15. A method of detecting a target nucleic acid sequence, said method comprising:

a) attaching a first adapter nucleic acid to a first target nucleic acid sequence to form a modified first target nucleic acid sequence, wherein said first adapter nucleic acid comprises a sequence substantially complementary to a sequence selected from the sequences set forth in Table I, Table II, Table III, and Table IV;

b) contacting said modified first target nucleic acid sequence with an array comprising: an array of at least 25 different addresses, each address comprising a different capture probe selected from the group consisting of the sequences set forth in Table 1, Table 2, Table 3 and Table 4; and

c) detecting the presence of said modified first target nucleic acid sequence.

16. A method of detecting a target nucleic acid, said method comprising:

a) hybridizing a first adapter probe with a first target nucleic acid, said first adapter probe comprising a first domain that is complementary to said first target nucleic acid and a second domain, said second domain comprising a first sequence substantially complementary to a selected from the group consisting of the sequences set forth in Table I, Table II, Table III and Table IV to form a first hybridization complex;

b) contacting said first hybridization complex with an enzyme such that when said first domain of said adapter probe is perfectly complementary with said first target nucleic acid, said first adapter probe is altered resulting in a modified first adapter probe;

c) contacting said modified first adapter probe with a population of microspheres comprising at least a first subpopulation comprising a first capture probe, such that said first capture probe and said modified first adapter probe form a second hybridization complex; and

d) detecting the presence of said modified first adapter probe as an indication of the presence of said target nucleic acid.

* * * * *